

302. (Amended) The method of claim 297, wherein information indicating the availability, use or usage of said mass medium programming or said data are stored or communicated to a remote data collection station, said method further comprising the step of selecting evidence information that identifies or designates one selected from the group consisting of:

- G 54
Gmcd
- (1) mass medium programming;
 - (2) a use of programming;
 - (3) a transmission station;
 - (4) a receiver station;
 - (5) a network;
 - (6) a broadcast station;
 - (7) a channel on a cable system;
 - (8) a time of transmission;
 - (9) a unique identifier datum;
 - (10) a source or supplier of data;
 - (11) a distributor or an advertisement; and
 - (12) an indication of [copyright] a payment obligation.

II. REMARKS

A. Introduction

Applicants have carefully reviewed the Office Action originally issued on March 30, 2000 and have made the foregoing amendments in response thereto.

1. Claim Accounting

Claims 13-14, 16, 21-23, 26, 29, 34, 44-58, 60-61, 63, 65-67, 69-70, 73-74, 83, 89, 93, 95-98, 101, 103, 105-112, 114-116, 118-119, 130, 132, 134, 140, 149, 151-152,

154-156, 158-161, 181, 189-190, 192-193, 195, 197-203, 205, 210, 213-216, 219-222, 224, 231-233, 237, 239-240, 242-244, 246-253, 255-256, 259-264, 274, 280, 285, 287, 289-290, 292-296 & 301-302 are amended. Claims 2-14 & 16-302 are pending in the application. Applicants present no new matter in the foregoing amendments. Applicants respectfully request approval and entry of this amendment.

2. Summary of Office Action Rejections

The Office Action mailed on March 30, 2000 only rejects claims 2-131. However, Applicants' have added claims 132-302 in an amendment on May 10, 2000 in consonance with Applicants' agreement with the PTO to consolidate certain of Applicants' co-pending applications. Therefore, this response considers the rejection of claims 2-131 to apply to all currently pending claims 2-14 & 16-302.

The following summarizes the objections and rejections of the March 30, 2000 Office Action with respect to its corresponding paragraph numbers:

Paragraph 3. Claims 2-14 & 16-302 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

Paragraph 4. Claims 2-14 & 16-302 that are directed to digital related processes and apparatus, are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Paragraph 5. Claims 2-14 & 16-302 that are directed to data, datum, and indicia and related processes and apparatus, are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way to

enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Paragraph 6. Claims 2-14 & 16-302 are rejected under 35 U.S.C. § 112, first paragraph, because the best mode contemplated by the inventor has not been disclosed.

Paragraph 8. Claims 2-14 & 16-302 are rejected under 35 U.S.C. § 112, second paragraph, as failing to set forth the subject matter which Applicants regard as their invention.

Paragraph 9. Claims 2-14 & 16-302 using the terms having different descriptions from Applicants' 1987 specification and 1981 priority application, are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants' regard as their invention.

Paragraph 10. Claims 2-14 & 16-302 using the terms, *inter alia*, 'program' and 'programming' are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants' regard as their invention.

Paragraph 12. Claims 2-14 & 16-302 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Applicants' U.S. Pat. Nos. 4,694,490 and 4,704,725.

Paragraph 14. Claims 2-14 & 16-302 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants WO 89/02682.

Paragraph 15. Claims 2-14 & 16-302 that are directed to processes of controlling cable head end processes and monitoring of those processes and combined medium presentation, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Greenberg, U.S. Pat. No. 4,547,804 in view of Galumbeck et al., U.S. Pat. No. 4,725,886.

Paragraph 16. Claims 2-14 & 16-302 that are directed to, *inter alia*, processes of controlling broadcast subscriber stations, including decrypting, processing, storing, generation and monitoring to those processes and combined medium presentation, are

rejected under 35 U.S.C. § 103(a) as being unpatentable over Jeffers et al., U.S. Pat. No. 4,739,510.

Paragraph 17. Claims 2-14 & 16-302 that are directed to, *inter alia*, processes of controlling cable head end processes and monitoring of those processes and combined medium presentation are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hazelwood et al., U.S. Pat. No. 4,025,851 in view of the publication "System and Apparatus for Automatic Monitoring Control of Broadcast Circuits" by Yaname et al. and Hetrich, Australian Patent No. 74,619.

Paragraph 18. Claims 2-14 & 16-302 that are directed to, *inter alia*, processes of controlling subscriber station processes and monitoring of those processes and of combined medium presentation and processes, are rejected under 35 U.S.C. § 103(a) as being unpatentable over either one of the common subject matter suggested by Campbell et al., (WO 81/02961, abandoned parent application no. 135,987, and U.S. Pat. No. 4,536,791), in view of at least one or more of: Breeze "Television Line 21 Encoded Information and It's Impact on Receiver Station Design"; Schnee, U.S. Pat. No. 4,290,142; and Zaboklicki, DE 2,904,891.

Paragraph 19. Claims 2-14 & 16-302 that are directed to, *inter alia*, either processes of controlling affiliate stations and processes and monitoring of those processes and combined medium presentation or processes of controlling subscriber stations and method and process for monitoring and providing combined medium presentations, that fall out each particular determining group members of the group of claims described in rejection above, the groups are rejected further in view of one or more of: Hazelwood et al., Yaname et al., Hetrich, Marsden, Young et al., "Journal of SMPTE" Oct. 1971; U.S. Pat. No. 3,761,888 to Flynn, U.S. Pat. No. 3,627,914 to Davis, Tunmann et al., U.K. Pat. No. 959,374 to Germany, Byloff, Chiddix, Skilton, Schiller et al., Zettl, Vikene, U.S. Pat. No. 4,547,804 to Greenberg, Jeffers et al., Diederich, Campbell et al. (WO 81/02961, abandoned U.S. application no. 135,987, and U.S. Pat. No. 4,536,791), Kazama et al.,

Gosch, Stern, Breeze, Barlow, Millar, U.S. Pat. No. 4,725,886 to Galumbeck et al., "CBS/CCETT North American Broadcast Teletext Specification," Zaboklicki, U.S. Pat. No. 4,064,490 to Nagel, U.S. Pat. No. 4,251,691 to Kakiyara, Hedger et al., Anderson, Gunn, Gaucher, U.S. Pat. No. 4,290,142 to Schnee et al.

Paragraphs 20-21. All claims are subject by the Office to an administrative requirement based on the nonstatutory double patenting rejection based on a judicially created doctrine preventing the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees.

Paragraph 23. All pending claims are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over at least one or more of Applicants' issued patents, U.S. Pat. Nos.: 4,694,490; 4,704,725; 4,965,825; 5,109,414; 5,233,654; and 5,335,277, in view of at least one or more of: Marsden, Young et al., Flynn, Davis, Tunmann et al., Germany, Chiddix, Skilton, Schiller et al., Zettl, Vikene, Greenberg, Jeffers et al., Diederich, Campbell et al., Kazama et al., Gosch, Stern, Breeze, Barlow, Millar, Galumbeck, CBS/CETT North American Broadcast Teletext Specification," Zaboklicki, Nagel, Kakiyara, Hedger et al., Anderson, Gunn, Gaucher, and Schnee et al.

Paragraph 24. Rejects Applicants' basis for amending the typographical errors in the instant specification in two places on page 37.

Paragraph 25. The oath or declaration is defective under 37 C.F.R. § 1.67(a).

B. Summary of Claim Amendments

Claims 13-14, 16, 21-23, 26, 29, 34, 44-58, 60-61, 63, 65-67, 69-70, 73-74, 83, 89, 93, 95-98, 101, 103, 105-112, 114-116, 118-119, 130, 132, 134, 140, 149, 151-152, 154-156, 158-161, 181, 189-190, 192-193, 195, 197-203, 205, 210, 213-216, 219-222, 224, 231-233, 237, 239-240, 242-244, 246-253, 255-256, 259-264, 274, 280, 285, 287, 289-290, 292-296 & 301-302 are amended.

Claim 13 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 14 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 16 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 21 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 22 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 23 has been amended to correct a typographical error.

Claim 26 has been amended to correct a typographical error.

Claim 29 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 34 has been amended to correct a typographical error.

Claim 44 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 45 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 46 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 47 has been amended to correct an antecedent basis problem.

Claim 48 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 49 has been amended to correct an antecedent basis problem.

Claim 50 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 51 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 52 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 53 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 54 has been amended to correct a typographical error.

Claim 55 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 56 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 57 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 58 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 60 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 61 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 63 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 65 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 66 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 67 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 69 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 70 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 73 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 74 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 83 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 89 has been amended to correct an antecedent basis problem.

Claim 93 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 95 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 96 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 97 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 98 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 101 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 103 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 105 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 106 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 107 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 108 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 109 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 110 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 111 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 112 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 114 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 115 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 116 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 118 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 119 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 130 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 132 has been amended to correct an antecedent basis problem.

Claim 134 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 140 has been amended to correct an antecedent basis problem.

Claim 149 has been amended to correct a typographical error.

Claim 151 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 152 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 154 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 155 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 156 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 158 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 159 has been amended to correct an antecedent basis problem.

Claim 160 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 161 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 181 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 189 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 190 has been amended to correct an antecedent basis problem.

Claim 192 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 193 has been amended to correct an antecedent basis problem.

Claim 195 has been amended to correct an antecedent basis problem.

Claim 197 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 198 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 199 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 200 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 201 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 202 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 203 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 205 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 210 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 213 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 214 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 215 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 216 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 219 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 220 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 221 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 222 has been amended to correct an antecedent basis problem.

Claim 224 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 231 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 232 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 233 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 237 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 239 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 240 has been amended to correct an antecedent basis problem.

Claim 242 has been amended to correct an antecedent basis problem.

Claim 243 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 244 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 246 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 247 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 248 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 249 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 250 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 251 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 252 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 253 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 255 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 256 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 259 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 260 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 261 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 262 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 263 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 264 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 274 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 280 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 285 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 287 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 289 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 290 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 292 has been amended to further clarify the claim language in view of Applicants' disclosure.

Claim 293 has been amended to correct an antecedent basis problem.

Claim 294 has been amended to correct an antecedent basis problem.

Claim 295 has been amended to correct an antecedent basis problem.

Claim 296 has been amended to correct an antecedent basis problem.

Claim 301 has been amended to correct a typographical error.

Claim 302 has been amended to further clarify the claim language in view of Applicants' disclosure.

C. Statement of Patentable Novelty under 37 C.F.R. § 1.111

Applicants submit that the independent claims as amended include the following limitations that are not found in the prior art. These limitations show patentable novelty in view of the state of the art disclosed by the references cited and the objections made.

Claim 2:

- identifying a control signal;
- searching for said control signal in an input data stream based on said step of identifying;
- passing said control signal from said processor to said at least one controllable device based on said step of searching; and
- communicating information on the passing of said control signal from said receiver station to said remote station.

Claim 13:

- a plurality of input ports for receiving multimedia signals;
- an output port;
- a processor operatively connected to said plurality of input ports and said output port; said processor programmed for:
 - identifying a signal from at least one of said plurality of input ports;
 - passing said signal from said processor to said output port based on said step of identifying;

communicating information of the passing of said identified signal based on said step of passing.

Claim 21:

inputting an instruct signal which is effective at said subscriber station to control an apparatus and at least one of a code and a datum to serve as evidence of at least one of passing of said instruct signal to a controllable apparatus and functioning of said controllable apparatus in response to said instruct signal;

detecting the presence of at least one of an instruction and said at least one of a code and a datum, which is effective at said subscriber station to at least one of (i) generate at least one of subscriber station specific datum and (ii) select and assemble a plurality of subscriber station specific data into a record;

processing at the subscriber station at least one locally inputted datum and performing, in response to said detected at least one of an instruction and said at least one of a code and a datum, at least one of:

(a) communicating said generated at least one subscriber station specific data to a transmitter; and

(b) communicating said record and said selected specific plurality of subscriber specific data to a transmitter; and

transmitting at least one of said communicated at least one generated subscriber station specific datum and said communicated record and plurality of subscriber specific data to said at least one remote collection station.

Claim 25:

receiving at said receiver identification signals that identify specific signal content for at least one of a plurality of one of concurrent broadcast and cablecast signal transmissions;

providing a comparison signal to said processor;
comparing said comparison signal to said identification signals and generating a control signal identifying a desired one of said plurality of one of broadcast and cablecast signal transmission based on said step of comparing;
tuning said receiver, based on said generated control signal, to receive said desired one of said plurality of one of broadcast and cablecast signal transmissions;
inputting at least a portion of said desired signal transmission to said processor;
and
responding to (i) an instruct signal detected in said desired signal transmission which is effective to control a receiver station apparatus and (ii) a code or datum to serve as evidence of the passing of said instruct signal to a controllable apparatus or of the functioning of a controllable apparatus in response to said instruct signal.

Claim 26:

receiving said at least one instruct signal and at least one of a code and a datum at said at least one origination transmitter station and delivering said at least one instruct signal and said at least one of said code and said datum to at least one origination transmitter, said at least one instruct signal being operative at said at least one receiver station to control at least one controllable apparatus, said at least one of said code and said datum being operative at said at least one receiver station to serve as evidence of at least one of passing of said at least one instruct signal to said at least one controllable apparatus and functioning of said at least one controllable apparatus in response to said at least one instruct signal;

receiving said at least one control signal which at said remote intermediate data transmitter station operates to control the communication of said at least one instruct signal and said at least one of said code and said datum: and

transmitting said at least one control signal to said at least one origination transmitter before a specific time.

Claim 29:

storing user data of interest;
receiving from a television programming source an information transmission containing television programming;
transferring said television programming to said television monitor and displaying the television programming;
detecting in said information transmission at least one instruct signal which is operative to control a receiver station apparatus and at least one of a code and a datum to serve as evidence of (i) a passing of said at least one instruct signal to at least one controllable apparatus and (ii) the functioning of said at least one controllable apparatus in response to said at least one instruct signal;
controlling said computer based on said detected at least one instruct signal, said step of controlling comprising:
selecting at least a portion of said stored user data of interest;
communicating said selected at least said portion of said stored user data of interest to said television monitor; and subsequently
ceasing to communicate said select at least said portion to said television monitor;
and
evidencing said functioning of said at least one controllable apparatus is response to said at least one instant signal by storing said at least one of said code and said datum in a record.

Claim 31:

receiving and storing a program that contains video information;

receiving at least one instruction and at least one of code and a datum, said at least one instruction having effect at a user station to control at least one controllable apparatus, said at least one of said code and said datum having effect at said user station to serve as evidence of at least one of passing of said at least one instruction to said at least one controllable apparatus and at least one function performed by said at least one controllable apparatus in response to said at least one instruction;

encoding said at least one instruction, wherein said step of encoding translating said at least one instruction to at least one control signal, said at least one control signal for directing a processor at said user station to control said at least one controllable apparatus;

storing said at least one control signal from said step of encoding in conjunction with said program; and

storing said at least one of said code and said datum from said step of receiving in conjunction with said program and said at least one control signal.

Claim 36:

receiving at at least one of a broadcast and a cablecast transmitter station (i) at least one instruct signal which is effective at said plurality of receiver stations to control at least one controllable apparatus and (ii) at least one of a code and a datum to serve as evidence of at least one of passing of said at least one instruct signal to at least one controllable apparatus and functioning of said at least one controllable apparatus in response to said at least one instruct signal;

transferring said at least one instruct signal and said at least one of said code and said datum to at least one transmitter;

receiving at least one control signal at said transmitter station, said control signal designating at least one receiver station of said plurality of receiver stations in which said at least one instruct signal is addressed; and

transmitting said at least one control signal from said at least one transmitter, said at least one transmitter at least one of broadcasting and cablecasting said at least one instruct signal, said at least one of said code and said datum, and said at least one control signal to said plurality of receiver stations.

Claim 44:

selecting a media program from a plurality of media on the basis of a subscriber program;

outputting said selected media program from said step of selecting a media at said receiver station;

inputting a command at said input device in response to a command communicated in said selected media program;

receiving at said receiver station a control signal from an external source;

controlling a presentation of a unit of said selected media program at a peripheral device to said computer in accordance with said control signal based on said step of inputting; and

communicating from said receiver station to said transmitter station data that represents a record of said selected media or said control signal.

Claim 46:

receiving an input from a user at said user input device;

processing said input from said step of receiving an input at said receiver station to enable said receiver station to receive said informative materials;

receiving said informative materials from said communication network in response to reception of said informative material enabled in said step of processing; and

displaying said informative material from said step of receiving informative materials at said receiver station.

Claim 50:

receiving at each of said plurality of receiver stations from said communication network a television program;

receiving at each of said plurality of receiver stations from said communication network said informative materials;

decoding said informative materials at each of said plurality of receiver stations;

storing said informative materials from said step of decoding at said storage device of each of said receiver stations;

recording use of said informative materials at each of said plurality of receiver stations; and

reporting the record of use of said informative materials from said step of recording from each of said plurality of receiver stations to said transmitter station.

Claim 54:

(1) receiving a unit of programming to be transmitted at a remote transmitter station, and said transmitter station transferring said unit of programming to a transmitter;

(2) receiving one or more instruct signals and a code or datum at said remote transmitter station, said one or more instruct signals operate at the remote receiver station to control a receiver station apparatus and direct said receiver station to communicate said code or datum to a remote data collection site, said transmitter station transferring said one or more instruct signal to said transmitter;

(3) receiving one or more control signals at said remote transmitter station, said control signals control the communication of said unit of programming and said one or more instruct signals between said remote intermediate transmitter station and said remote receiver station; and

(4) transmitting from said remote transmitter station an information transmission comprising said first unit of programming, said one or more instruct signals and said code or datum in response to said one or more control signals at said remote intermediate transmitter station.

Claim 58:

receiving a unit of mass medium programming to be transmitted by the remote intermediate mass medium programming transmitter station and delivering said unit of mass medium programming to a transmitter, said unit of mass medium programming having an instruct signal which is effective to control a receiver station apparatus and a code or datum to serve as evidence of the passing of said instruct signal to a controllable device or of the functioning of said controllable apparatus in response to said instruct signal;

receiving one or more control signals which at the remote intermediate mass medium programming transmitter station operate to control the communication of said unit of mass medium programming; and

transmitting said one or more control signals to said transmitter before a specific time.

Claim 61:

storing user data of interest;

receiving from a mass medium programming source an information transmission containing mass medium programming;

transferring said mass medium programming to said output device and outputting said mass medium programming;

detecting in said information transmission an instruct signal which is effective to control a receiver station apparatus and a code or datum to serve as evidence of the

passing of said instruct signal to a controllable device or of the functioning of said controllable apparatus in response to said instruct signal; and
controlling said computer based on said detected instruct signal, said step of controlling comprising:

- (1) selecting a specific portion of said stored user data of interest;
- (2) communicating said selected specific portion of said stored user data of interest to said output device; and subsequently
- (3) ceasing to communicate said specific portion to said output device;
- (4) delivering at said output device the combined or sequential output of said received mass medium programming and said selected specific portion of said stored user data of interest .

Claim 63:

receiving said control signal at said receiver station;
detecting said control signal at said receiver station;
passing said control signal from said processor to at least one peripheral device through one of said plurality of peripheral device interface connections;
establishing what function said control signal from said step of passing said control signal performed at said at least one peripheral device; and
storing on said storage device the function of said control signal from said step of establishing what function said control signal performed at said at least one peripheral device .

Claim 73:

storing user data;
receiving mass medium programming from a programming source and outputting said mass medium programming at said output device;

receiving one of a broadcast information transmission and a cablecast information transmission including an instruct signal which is effective to control receiver station apparatus and at least one of a code and a datum to serve as evidence of one of:

- (1) a passing of said instruct signal to controllable apparatus and;
- (2) a functioning of said controllable apparatus in response to said instruct signal;

detecting said instruct signal in said one of said broadcast information transmission and said cablecast information transmission and passing said detected instruct signal to said computer; and

controlling said computer based on said detected instruct signal, said step of controlling including:

- (1) selecting a specific portion of data;
- (2) communicating said selected specific portion of data to said storage device; and subsequently
- (3) ceasing to communicate an image from said storage device, said image based on said specific portion of data;
- (4) delivering at said output device said combined programming presentation, said combined programming presentation comprising simultaneous output of said received mass medium programming with said image, said combined programming presentation presented in the period of time between said step of communicating step of ceasing to communicate;

detecting said at least one of a code and a datum evidencing said one of:

- (1) a passing of said instruct signal to said controllable apparatus and;
- (2) a functioning of said controllable apparatus in response to said instruct signal;

storing said at least one of a code and a datum.

(3) a time in which to one of output and store one of a portion of said mass medium programming and a portion of computer output.

Claim 83:

receiving the mass medium programming to be transmitted and delivering said mass medium programming to transmitter apparatus;

receiving said at least one instruct signal at said transmitter station, said at least one instruct signal at the receiver station operating to control a receiver station apparatus and store at least one of a code and a datum to serve as evidence of one of:

- (a) a passing of said at least one instruct signal to controllable apparatus; and
- (b) a functioning of said controllable apparatus in response to said at least one instruct signal;

transferring said at least one instruct signal and said at least one of a code and a datum to said transmitter apparatus; and

transmitting said mass medium programming, said at least one instruct signal, and said at least one of a code and a datum.

Claim 90:

(1) receiving at the remote transmitter station at least one instruct signal which operates at the receiver station to perform one of the functions of assembling and communicating receiver specific data to a remote data collection station;

(2) receiving a control signal which operates at the remote transmitter station to control the communication of at least one instruct signal, and communicating said control signal to said remote transmitter station;

(3) monitoring a use of at least one of said control signal and a resource which responds to said control signal;

- (4) storing a record of the use of at least one of said control signal and a resource which responds to said control signal from said step of monitoring;
- (5) receiving one of a code and a datum designating a specific instruct signal to be transmitted by the remote transmitter station, and said remote transmitter station transferring said designated specific instruct signal to a transmitter; and
- (6) transmitting from said remote transmitter station an information transmission comprising at least one designated instruct signal, said at least one designated instruct signal being transmitted at at least one specific time and on at least one specific channel in accordance with said control signal.

Claim 93:

displaying a television program that promotes at least one of a product, a service, and a media output, said interactive television viewing apparatus having an input device to receive input from a viewer;

prompting said viewer during said television program whether said viewer wants said at least one of a product, a service, and a media output prompted in said step of displaying, said interactive television viewing apparatus having an output device for outputting at least one of said product, said service, and said media output;

receiving a reply from said viewer at said input device in response to said step of prompting said viewer, said interactive television viewing apparatus having a processor for processing said viewer reply to perform at least one of the functions of obtaining and enabling instructions which perform at least one of the functions of providing and controlling output of said at least one of a product, a service, and a media output in response to said instructions;

delivering said instructions at said interactive television viewing apparatus in response to said step of receiving a reply, said instructions controlling said interactive

television viewing apparatus in performing a technique for delivering said at least one of a product, a service, and a media output;

processing said instructions from said step of delivering;

performing said technique at said interactive television viewing apparatus, said processor delivering said at least one of a product, a service, and a media output on the basis of said instructions;

monitoring use of at least one of said instructions and a resource which outputs at least a portion of said at least one of a product, a service, and a media output; and

storing a record of said use of said at least one of said instructions and said resource from said step of monitoring.

Claim 122:

(1) identifying at least one of a resource and a control signal;
(2) monitoring at least one of said resource and said control signal;
(3) storing a record of the use of at least one of said resource and said control signal from said step of monitoring; and

(4) communicating information evidencing said use of at least one of said resource and said control signal from said step of storing a record from said receiver station to a remote station.

Claim 132:

receiving a control signal at said receiver station;

detecting said control signal at said receiver station;

passing said control signal from a detector to said at least one controlled device;

generating based on said step of passing said control signal, a plurality of signals that identify characteristics of said control signal in said step of passing;

selecting at least one identifying signal from said plurality of identifying signals based on said step of generating said identifying signals; and

storing said at least one identifying signal based on said step of selecting said at least one identifying signal in said storage device.

Claim 148:

inputting one of a viewer's and participant's reaction to mass medium programming at a subscriber station;

receiving at said subscriber station an indication of at least one of a control signal to process and an output to deliver in consequence of a specific subscriber input;

determining a presence of said specific subscriber input at said subscriber station by processing said one of a viewer's and participant's reaction to mass medium programming;

processing said control signal, said control signal causing an effect of controlling one or more receiver station apparatus and at least one of code and data to serve as evidence of passing said control signal to at least one controllable device and of functioning of said controlled one or more receiver station apparatus in response to said instruct signal at said subscriber station in consequence of said step of determining; and

transferring from said subscriber station to at least one remote data collection station a plurality of indicia confirming processing of said control signal and said control signal effect from said step of processing.

Claim 151:

(1) receiving mass medium programming to be transmitted by the remote intermediate mass medium transmitter station and delivering said mass medium programming to a transmitter;

(2) receiving at least one receiver control signal at said remote intermediate mass medium transmitter station, said at least one receiver control signal being operative at the remote receiver station to control receiver station apparatus and including at least one of code and data to serve as evidence of passing said at least one receiver control signal to at least one controllable device and of the functioning of said controlled one or more receiver station apparatus in response to said at least one receiver control signal;

(3) receiving at least one transmitter control signal at said remote intermediate mass medium transmitter station, said at least one transmitter control signal is effective at said remote intermediate mass medium transmitter station to control the communication of at least one of said mass medium programming and said at least one receiver control signal; and

(4) causing said remote intermediate mass medium transmitter station to transmit in accordance with said at least one transmitter control signal an information transmission comprising one of said mass medium programming and said at least one receiver control signal.

Claim 154:

receiving television programming at a transmitter station and delivering said television programming to a first transmitter;

receiving said at least one control signal at transmitter station apparatus, said at least one control signal being operative at said at least one of receiver station to control a plurality of controllable receiver station controllable receiver station apparatus based on said at least one control signal] devices;

transferring said at least one control signal one of said first transmitter and a second transmitter; and

transmitting, to said at least one receiver station, said television programming , said at least one control signal and at least one of code and data to serve as evidence of

passing portions of said at least one control signal to said plurality of controllable receiver station devices and of functioning of said plurality of controllable receiver station devices based on said at least one control signal.

Claim 155:

input apparatus for receiving media signals;
an output port;
a storage device;
a processor operatively connected to said input apparatus, said output port, and said storage device, said processor programmed for:
receiving a media signal from said input apparatus;
detecting a control signal from said media signal;
passing said control signal from said media signal, to said output port, said output port transferring said control signal to an external device;
generating said plurality of identifying signals that identify characteristics of said control signal from the step of passing said control signal;
selecting said at least one identifying signal from said plurality of identifying signals from said step of generating said plurality of identifying signals; and
storing said at least one identifying signal from said step of selecting at least one said identifying signal in said storage device.

Claim 159:

inputting a command at said input device;
receiving at said receiver station an indication of a multiple use control signal from said remote station;
processing at said receiver station said indication of said multiple use control signal in accordance with said computer program;

communicating a computer output to a computer peripheral and controlling a presentation of media programming in accordance with said multiple use control signal;
communicating from said receiver station to said transmitter station data that represents a record of the use of said media programming or said multiple use control signal.

Claim 161:

storing a plurality of first decryption signals in said storage device;
indexing said plurality of first decryption signals to provide an index containing a second plurality of decryption signals;
receiving a signal from an external source, said signal indicating a selection of said one of a decryption key and a decryption code from one of said plurality of first decryption signals and said second plurality of decryption signals by locating said one of a decryption key and a decryption code with said index;
selecting said one of a decryption key and a decryption code based on said index;
loading said one of a decryption key and a decryption code to a decryption device;
and
storing information in said storage device that reflects the selection of said one of a decryption key and a decryption code.

Claim 181:

receiving at a transmitter station downloadable code which is effective to control a receiver station apparatus and a first code or datum to serve as evidence of passing of said downloadable code, each of said plurality of receiver stations having a target processor to process data;
transferring said downloadable code to a transmitter;

receiving one or more control signals at said transmitter station, said one or more control signals operating to execute a portion of said downloadable code;

receiving a second code or datum which operates to evidence a function performed by said downloadable code; and

transferring said one or more control signals to said transmitter, and transmitting an information transmission comprising the downloadable code, said one or more control signals, and at least one of said first code or datum and said second code or datum.

Claim 189:

receiving a unit of mass medium programming to be transmitted by the remote intermediate mass medium transmitter station and delivering said unit of mass medium programming to a transmitter;

receiving one or more instruct signals and a first code or datum at said remote intermediate mass medium transmitter station, said one or more instruct signals operate at the remote receiver station to control a receiver station apparatus and said first code or datum operate to serve as evidence of the passing of said one or more instruct signals to a controllable device or of the functioning of said controllable apparatus in response to said one or more instruct signals, and communicating said one or more instruct signals and said first code or datum to said transmitter;

receiving one or more control signals at said remote intermediate mass medium transmitter station, said one or more control signals control the communication of said unit of programming, said one or more instruct signals, and said first code or datum from said remote intermediate mass medium transmitter station to said receiver station;

receiving a second code or datum which operates to identify said unit of mass medium programming; and

transmitting from said remote intermediate mass medium transmitter station an information transmission comprising said unit of mass medium programming, said one or more instruct signals and said first code or datum.

Claim 194:

receiving at said origination transmitter station an instruct signal to be transmitted by the remote intermediate data transmitter station and delivering said instruct signal to an origination transmitter, said instruct signal being effective at the receiver station to generate output information content which is effective to control a receiver station apparatus and to communicate a first code or datum to serve as evidence of the passing of said instruct signal to a controllable device or of the functioning of said controllable apparatus in response to said instruct signal, said first code or datum designating signal content or output information content to be generated;

receiving one or more control signals which at the remote intermediate data transmitter station operate to control the communication of said instruct signal; and

transferring said one or more control signals to said origination transmitter before a specific time, said origination transmitter transmitting said instruct signal, said first code or datum, and said one or more control signals.

Claim 197:

transmitting from said at least one transmitter station to said at least one receiver station operating instructions associated with at least one of said command and said at least one control signal, said operating instructions being effective to program said at least one receiver station to respond in a predetermined fashion to at least one of said command and said at least one control signal;

inputting said command at said input device;

inputting said at least one control signal from said at least one transmitter station
at said at least one receiver station;

comparing information designated by said command to information designated by
said at least one control signal;

processing said computer programming and communicating computer output to a
computer peripheral device in accordance with said operating instructions based on said
step of comparing;

outputting said computer output at said computer peripheral location; and

communicating to a remote station at least one datum evidencing use of at least
one of said command, said at least one control signal, said computer programming, and
said computer output to enable said remote station to bill said subscriber for the use of
said at least one control signal or said computer programming.

Claim 198:

receiving at said at least one input device at least one user input based on a request
for user input;

storing said at least one user input at said at least one storage device;

receiving at said at least one receiver station at least one information transmission
from said at least one transmitter station, said at least one information transmission
including processor instructions;

comparing information stored at said at least one processor with said stored at
least one user input based on said received at least one information transmission;

authorizing processing at said at least one receiver station of said processor
instructions based on the result from said step of comparing;

recording a result of said step of comparing at said at least one storage device.

Claim 200:

(1) receiving said downloadable code which is effective at said at least one receiver station to control a receiver station apparatus and to communicate at least one of a code and a datum to serve as one of evidence of the passing of a signal to a controllable device and the functioning of said controllable device in response to said signal, and delivering said downloadable code to a transmitter;

(2) receiving at least one control signal which operates at said at least one receiver station to execute a portion of said downloadable code at said processor; and

(3) causing said at least one control signal to be communicated to said transmitter at a specific time, thereby to transmit an information transmission comprising said downloadable code and said at least one control signal.

Claim 210:

storing user data of interest;

receiving television programming from a television programming source;

receiving an information transmission including at least one instruct signal which is effective to control at least one controllable device at said receiver station, and receiving at least one of a code and a datum to serve as evidence of at least one of the passing of said at least one instruct signal to said at least one controllable device, and the functioning of said at least one controllable device in response to said at least one instruct signal;

detecting said at least one instruct signal in said information transmission;

controlling said computer based on said detected at least one instruct signal, said step of controlling comprising:

(1) selecting and communicating a first portion of said image to said television monitor;

(2) communicating a second portion of said image to said television monitor based on said stored user data of interest; and subsequently

(3) ceasing to display said image at said television monitor;
delivering said image at said television monitor in the period of time between said
step of communicating and said step of ceasing to display, said image based on
programming received at said receiver station at different times; and

performing at least one of:

- (1) storing said at least one of a code and a datum at said receiver station; and
- (2) communicating said at least one of a code and a datum from said receiver
station to at least one remote data collection station.

Claim 213:

receiving at least one instruct signal at a transmitter station and delivering said at
least one instruct signal to a transmitter, said instruct signal being effective at said at least
one of a plurality of receiver stations, to control at least one controllable device and to
assemble a record containing at least one of a first code and datum to serve as evidence of
at least one of: (a) the passing of said at least one instruct signal to said at least one
controllable device, and (b) the functioning of said at least one controllable device in
response to said at least one instruct signal;

receiving said at least one of a second code and datum at said transmitter station,
said at least one of a code and a datum designating at least one of said at least one instruct
signal and said condition;

receiving said at least one control signal at said transmitter station, said at least
one control signal operating at said at least one of said plurality of receiver stations to
execute said at least one instruct signal based on a second subscriber reaction;

transferring at least one of said at least one of a code and a datum and said at least
one control signal to said transmitter at a specific time; and

transmitting said at least one instruct signal, said at least one of said second code
and a datum, and said at least one control signal.

Claim 216:

- (a) receiving downloadable processor instructions;
- (b) detecting said downloadable processor instructions;
- (c) passing a portion of said downloadable processor instructions selectively to a first apparatus;
- (d) executing a portion of said downloadable processor instructions at said programmable controller;
- (e) controlling said computer in accordance with said downloadable processor instructions; and
- (f) storing information evidencing a function performed by or initiated by said first apparatus in consequence of downloadable processor instructions having been passed selectively to said first apparatus.

Claim 217:

- (1) receiving said television programming at said at least one origination transmitter station and delivering said television programming to at least one origination transmitter, said television programming having an associated instruct signal which is effective at said one or more receiver stations to control a receiver station apparatus and having a code or datum to serve as evidence of the passing of said instruct signal to a controllable device or of a functioning of said controllable apparatus in response to said instruct signal;
- (2) receiving said one or more control signals which at the remote intermediate television transmitter station operate to control the communication of a specific one or more of said plurality of units of television programming; and
- (3) transmitting said one or more control signals to said at least one origination transmitter before a specific time.

Claim 220:

receiving mass medium programming at said receiver station from a mass medium programming source and outputting the mass medium programming at an output device, said output device adapted to output mass medium programming;

receiving a broadcast or cablecast information transmission at said receiver station, said information transmission including one or more instruct signals to direct output to supplement said mass medium programming;

detecting a instruct signal in said information transmission and passing said detected instruct signal to a processor; and

controlling said processor based on said detected instruct signal, said step of controlling comprising:

(a) receiving an instruct signal which is effective to control a receiver station apparatus, a code or datum to serve as evidence of the passing of said instruct signal to a controllable device or of the functioning of said controllable apparatus in response to said instruct signal,

(b) outputting said instruct signal to provide supplemental output on the basis of stored user data of interest; and

outputting said output to supplement mass medium programming at an output device on the basis of said received instruct signal.

Claim 222:

(1) receiving a first code or datum at a transmitter station, wherein said code or datum designates a product or service offered in a television program or a viewer reaction to an offer communicated in a television program;

(2) receiving an instruct signal and a second code or datum at said transmitter station, wherein said instruct signal at the one or more receiver stations operates to

control a receiver station apparatus and said second code or datum to serve as evidence of the passing of said instruct signal to a controllable device or of the functioning of said controllable apparatus in response to said instruct signal;

(3) transferring at least one of said first code or datum and said instruct signal to a transmitter at said transmitter station at a specific time; and

(4) transmitting said instruct signal and at least one of (i) said first code or datum and (ii) said second code or datum from said transmitter station.

Claim 229:

receiving a programming signal containing mass medium programming and communicating said programming signal to a storage device;

receiving at least a first downloadable instruction which is effective at a user station to control a processor and a first code or datum to serve as evidence of the passing of said at least a first downloadable instruction to said processor or of the functioning of said processor in response to said at least a first downloadable instruction;

communicating said at least a first downloadable instruction and said first code or datum to said storage device; and

storing said at least a first downloadable instruction and said first code or datum at said storage device in association with said mass medium programming.

Claim 234:

(1) receiving at the remote transmitter station one or more instruct signals which operate at the receiver station to control a receiver station apparatus and a first code or datum to serve as evidence of the passing of said one or more instruct signals to a controllable device or of the functioning of said controllable apparatus in response to said one or more instruct signals;

(2) receiving a control signal which operates at the remote transmitter station to control the communication of at least one of said one or more instruct signals and communicating said control signal to said remote transmitter station;

(3) receiving a second code or datum designating a specific one of said one or more instruct signals to be transmitted by the remote transmitter station, and said transmitter station transferring said designated specific instruct signal to a transmitter; and

(4) transmitting from said remote transmitter station an information transmission comprising one or more designated instruct signals, said one or more instruct signals being transmitted at one or more specific times or on one or more specific channels in accordance with said control signal.

Claim 235:

receiving an information transmission at a receiver station, said information transmission containing television programming and a plurality of embedded signals;

detecting and identifying at least one of said plurality of embedded signals in said information transmission;

selecting a controllable receiver station apparatus based on information within said at least one identified embedded signal;

passing said at least one identified embedded signal to or within at least one reprogrammable device at said receiver station;

controlling said controllable receiver station apparatus based on instructions within said at least one identified embedded signal; and

storing information evidencing said step of controlling.

Claim 258:

means (a) for receiving an information transmission containing television programming;

means (b) for detecting and identifying at least one of a plurality of embedded signals in said information transmission;

means (c) for selecting a first apparatus based on information within said at least one of said plurality of embedded signals;

means (d) for passing a first identified embedded signal to or within at least one reprogrammable device at said receiver station;

means (e) for controlling said selected first apparatus based on instructions within said first identified embedded signal; and

means (f) for storing information evidencing said controlling.

Claim 263:

receiving at a transmitter station said downloadable executable processor instruction which is effective at said at least one of said plurality of receiver stations to control said device and a code or datum to serve as evidence of the passing of said downloadable executable processor instruction to said device or of the functioning of said device based on said downloadable executable processor instruction;

delivering said downloadable executable processor instruction to a transmitter;

receiving at said transmitter station one or more first control signals which at said at least one of said plurality of receiver stations operate to communicate said downloadable executable processor instruction to said at least one processor and execute said downloadable executable processor instruction; and

transferring said one or more first control signals to said transmitter at a specific time, said transmitter transmitting said downloadable executable processor instruction and said one or more first control signals.

Claim 274:

storing a file containing data or programming material;
programming said receiver station to locate, select, evaluate or decrypt said file;
inputting a command;
selecting said file and transmitting a copy to said processor and to an output device;
performing a datum check;
enabling said output device to process said copy in accordance with a result of said datum check; and
outputting said copy.

Claim 280:

inputting a command at said input device at said transmitter station;
distributing said data programming material from said storage device at said transmitter station in response to said command from said step of inputting a command;
creating a billing record at said transmitter station to evidence use of said data programming material at said transmitter station;
transmitting said billing record from said step of creating a billing record to said receiver station over a data network; and
receiving said billing record from said step of transmitting said billing record at said receiver station from said data network.

Claim 289:

transmitting programming material from said transmitter station to a plurality of receiver stations;
transmitting identification signals that correspond to said programming material transmitted in said step of transmitting programming material; and

receiving data from each of said plurality of receiver stations that reflect local use of said programming material transmitted in said step of transmitting programming material,

wherein said data include at least a portion of said identification signals.

Claim 296:

receiving a television signal containing television programming and communicating said television signal to a storage device for storage;

receiving an instruct signal which is effective to control a receiver station apparatus and a code or datum to serve as evidence of the passing of said instruct signal to a controllable device or of the functioning of said controllable device in response to said instruct signal;

selecting one of:

- (1) a time at which to communicate said instruct signal; and
- (2) a location to which to communicate said instruct signal;

communicating said instruct signal at said selected time or to said selected location; and

storing said instruct signal and said code or datum at said storage device based on said steps of selecting and communicating.

Claim 297:

outputting mass medium programming that promotes data, said interactive mass medium programming output apparatus having an input device to receive input from a subscriber;

prompting said subscriber during said step of outputting, said mass medium programming including audio, whether said subscriber wants said data promoted in said

step of displaying, said interactive mass medium programming output apparatus having an output device for outputting said data;

receiving a reply from said subscriber at said input device in response to said step of prompting said subscriber, said interactive mass medium programming output apparatus having a processor for processing said subscriber reply and controlling delivery of said data in response to instructions;

delivering said instructions at said interactive mass medium programming output apparatus in response to said step of receiving a reply, said instructions controlling said interactive mass medium programming output apparatus;

processing said instructions from said step of delivering, said instructions being effective to control a receiver station apparatus and store a code or datum to serve as evidence of the passing of an instruct signal to a controllable device or of the functioning of said controllable device in response to an instruct signal; and

delivering said data on the basis of said instructions.

D. Response to Allegation of Defective Oath/Declaration

The Examiner asserts that the oath or declaration is defective (Office Action at 182-184.) The Examiner asserts that the instant application is a continuation-in-part of Application No. 113,329, filed August 30, 1993. Thus, the Examiner requires a new oath or declaration that acknowledges the duty to disclose to the Office all information known to Applicants to be material to patentability which occurred between the filing date of the prior application and the filing date of the instant application. Applicants note that the disclosure as filed May 26, 1995 is identical to the disclosure of Application No. 113,329. Applicants properly filed the instant application under the provisions of 37 C.F.R. § 1.60 as in effect on May 26, 1995. Rule 60 provided conditions under which an Applicant may omit signing a new oath or declaration in a continuation application. Applicants

respectfully submit that they have fully complied with the provisions of Rule 60 as in effect upon filing of the instant application. Accordingly, Applicants request that the requirement for a new oath or declaration be withdrawn. Notwithstanding the above, should the Examiner maintain the requirement to file a new oath or declaration, Applicants respectfully request that the requirement be held in abeyance until allowable subject matter is indicated as provided under 37 C.F.R. § 1.111.

The Examiner addresses the preliminary amendment filed May 26, 1995, which substituted on page 1 a paragraph under 35 U.S.C. § 120 including references to related applications. This amendment included the statement: "This is a continuation of application serial no. 08/113,329, filed August 30, 1993, herein incorporated by reference in its entirety." The Examiner apparently believes this statement introduced new matter into the specification. As the document attempted to be incorporated by reference is an *identical* specification to the specification of the instant application, the Examiner's basis for this position is not entirely clear to Applicants. However to advance the prosecution of this application Applicants request that any alleged new matter by canceling the phrase "herein incorporated by reference in its entirety" from page 1.

E. Response to Objection to the Specification

The Office Action states, "The instant specification is objected to because applicants are changing, some +18 years after making the '81 disclosure, the original written description." (Office Action at 8 & 181.) Applicants note for the record that the amendment to the specification that the Office Action refers to is non-existent in the instant application. Applicants believe that the Office Action was referring to another one of Applicants' co-pending amendments to the specification. However, the instant amendment to the specification at page 37 corresponds to the allegations raised by the Office Action and will be addressed below.

The amendment changes page 37, lines 23-25, of the specification to read:

Controller, 39, 44, or 47, is preprogrammed to receive [units] words of signal information, to assemble said [units] words into signal [words] units that subscriber station apparatus can receive and process, and to transfer said [words] units to said apparatus.

(Additions underlined, deletions bracketed.)

Applicants submit that this amendment corrects an inadvertent error made in preparation of the specification as filed. The amendment includes no new matter. Applicants respectfully request that the Examiner withdraw the objection for the following reasons.

The amended language describes that aspect of the invention in which signal words are received and assembled into signal units. The assembly of signal words into signal units is described consistently throughout the specification in the manner effected by the amendment. As the amendment merely clarifies the disclosure, the amendment introduces no new matter.

The specification as filed, on page 14, lines 23-25, describes, "discrete words . . . that receiver apparatus must assemble in order to receive one complete instruction." A signal unit is defined as "one complete signal instruction." (Spec. at 14 ll. 26-27.) Thus, words must be assembled to create a signal unit. The specification consistently discloses that signal words are received and assembled into signal units.

Further, the specification consistently refers to signal words as the basic information block from which other information units are formed. The specification at page 65, lines 34-35, states; "Each message is composed in a whole number of signal words." "Said information consists of a series of discrete signal words." (Spec. at 70 ll. 28-29.) "[S]aid given signal word is an EOFS WORD and may be part of an end of file signal." (Spec. at 71 ll. 5-7.) "[T]o detect those particular uninterrupted series of EOFS WORDs that constitute end of file signals." (Spec. at 74 ll. 11-12.) "For example, end of file signals could include the signal word preceding said uninterrupted sequence." (Spec.

at 82 ll. 23-25.) Signal words are formed into commands and other signals throughout the specification.

In the recent Office Action, the sentence on page 15, lines 4-6, of the specification is relied upon as evidence that the amendment is new matter. (Office Action at 8 & 181.) The sentence reads, "Signal words may contain parts of signal units, whole signal units, or groups of partial or whole signal units or combinations." This statement simply describes the circumstance in which a higher level word could contain a lower level unit. Obviously, this statement does not contradict the prior statement that discrete *words must* be assembled to obtain a signal *unit*. As signal words are disclosed as being assembled into signal units, the amendment cannot contain new matter, regardless of the other variations disclosed in the specification. The statement relied upon by the Examiner actually supports the conclusion that the amendment does not introduce new matter.

In Personalized Media Communications, L.L.C. v. International Trade Commission, No. 97-1532 (Fed. Cir. Jan. 7, 1999), the U.S. Court of Appeals for the Federal Circuit construed claim 35 in U.S. Patent No. 5,335,277 (the '277 patent). The '277 patent issued to Applicants on August 2, 1994, from a specification identical to the specification filed in the instant application. In construing the claims of the '277 patent, the Court concluded that the prosecution history of the '277 patent did not prevent the term "information of a selected television unit" from reading on channel and time information. The Court thus addressed the meaning of the term "selected television program unit." The Court noted that "a selected program unit" is a particular television program, such as Wall Street Week. The Court did not address the meaning of the terms "signal unit" or "signal word." No reasoning set forth by the Court conflicts with Applicants' assertion that the specification discloses that signal units are assembled from signal words.

The amended language describes the assembly of signal words into signal units. The assembly of signal words into signal unit is described at page 14, lines 23-27, of the

specification. Therefore, the amendment does not include new matter. Accordingly, Applicants request that the objection to the specification be withdrawn.

F. Response to Rejections under 35 U.S.C. § 112

1. Response to Rejections under §112, first paragraph

a) Response to Written Description Rejections

(1) The Office Action Fails to Establish a Prima Facie Rejection Under the Written Description Requirement of 35 U.S.C. § 112

In the Office Action, the Examiner rejects claims 2-14 & 16-302 under 35 U.S.C. § 112, first paragraph for incorporating subject matter not described in the specification as filed in such a manner as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, were possessed of the claimed invention. (Office Action at 8.) Applicants firmly believe that the instant specification and respective priority documents, all of which are substantially identical, each describe the subject matter of the pending claims. Thus, in Applicants' view, the pending claims fully comply with the requirements of the first paragraph of 35 U.S.C. § 112. Accordingly, Applicants respectfully request the withdrawal of the rejections of claims 2-14 & 16-302 under 35 U.S.C. § 112, first paragraph.

The Examiner notes that the instant specification does not include the exact words and phrases of the disclosure of Applicants' parent Application No. 317,510 (the '81 disclosure.) (Office Action at 3.) The Examiner argues that since Applicants successfully assert that the '81 disclosure supports the pending claims and the '81 disclosure is not duplicated verbatim in the instant specification then it follows that the instant specification does not support the pending claims. The Examiner assumes that the subject matter in the '81 disclosure that is not duplicated verbatim within the instant specification is omitted from the instant specification. This assumption is incorrect.

Applicants maintain that, although the '81 disclosure is not included in identical words in the instant specification, the subject matter of the '81 disclosure is specifically included in the instant specification.

"The function of the description requirement is to ensure that the inventor had possession, as of the filing date of the application relied on, of the specific subject matter later claimed by him." *In re Wertheim*, 541 F.2d 257, 262, 191 U.S.P.Q. 90, 96 (C.C.P.A. 1976). Applicants rely on the filing date of November 3, 1981. On this date, Applicants filed Application No. 317,510, now issued as U.S. Patent No. 4,694,490 (the '490 patent). The specification of the '490 patent (the '81 disclosure) clearly demonstrates that Applicants had possession of the subject matter presently claimed.

"[T]he PTO has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims." *Id.* at 263, 191 U.S.P.Q. at 97. The Examiner has failed to meet this burden. The record of the prosecution of the instant application fails to include any reasons why persons skilled in the art would not recognize from the specification that Applicants invented the invention defined by the pending claims. The Examiner merely states, at page 15 of the Office Action, that the "instant '571 disclosure has not been found to describe the alleged '81 support ' . . . in such full, clear, concise, and exact terms . . . ' as is required under the law of 35 U.S.C. 112 1st paragraph." The Examiner also provides a list of claim phrases that are deemed to lack support (Office Action at 8-107). This list includes practically all phrases from nearly all the pending claims and amounts to an unsubstantiated assertion that the pending claims as a whole are unsupported under the written description requirement of 35 U.S.C. § 112, first paragraph. The Examiner has failed to present evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims.

The outstanding rejection under the written description requirement is merely a blanket, unsupported statement that the pending claims fail to meet the requirements of

35 U.S.C. § 112, first paragraph. Because the Examiner includes no reasons for the rejection, the only manner for Applicants to respond is to exhaustively demonstrate where each and every limitation in the pending claims is found in the specification without regard to how clearly the specification may show each limitation to those skilled in the art. However in order to advance the prosecution of the instant application, Applicants submit herewith, Appendix A, reciting specification support for each claim limitation to the instant specification at to the parent 1981 priority application.

(2) Applicants' Summary and Description of Integration of the Instant Specification

Each manifestation of Applicants' claimed invention, regardless of how the manifestation may be described in the specification, is a single embodiment of the invention. Thus, the specific support provided for each claim is by definition from within a single embodiment.

Applicants acknowledge that there are numerous embodiments of the presently claimed invention described in the specification. Applicants' specification is a single cohesive document with each successive section and example extending and developing the preceding disclosure. The various disclosures, examples, and subsystems disclosed within the specification are clearly intended to be integrated into general working systems, methods and apparatus. Applicants' specification is very carefully constructed to provide clear and unequivocal contextual relationship between the various inventive concepts, processes and apparatus that Applicants disclose.

At the outset, Applicants focus on the importance of *integrating* functionalities and state:

It is the object of this invention to unlock this great potential in the fullest measure by means of an *integrated system* of programming communication that joins together all these capacities most efficiently.

(Spec. at 3 ll. 30-33)(emphasis added).

In "Background of the Invention" (Spec. at 1-11), Applicants list a multitude of problems and limitations in the prior art for which this integrated system provides valuable solutions. Applicants *also introduce focal opportunity*:

Today great potential exists for combining the capacity of broadcast communications media to convey ideas with the capacity of computers to process and output user specific information. One such combination would provide a new radio-based or broadcast print medium with the capacity for conveying general information to large audiences--e.g., "Stock prices rose today in heavy trading,"--with information of specific relevance to each particular user in the audience--e.g., "but the value of your stock portfolio went down." (Hereinafter, the new media that result from such combinations are called "combined" media.)

Unlocking this potential is desirable because these new media will add substantial richness and variety to the communication of ideas, information and entertainment. Understanding complex subjects and making informed decisions will become easier.

(Spec. at 2 ll. 8-24.)

Applicants explicitly acknowledge that to succeed in the fullest measure means solving many technical problems as well as providing for a broad spectrum of subscriber information demands and equipment capacities:

To unlock this potential fully requires means and methods for combining and controlling receiver systems that are now separate--television and computers, radio and computers, broadcast print and computers, television and computers and broadcast print, etc.

But it requires much more.

To unlock this potential fully requires *a system with efficient capacity* for satisfying the demands of subscribers who have *little receiver apparatus and simple information demands* as well as subscribers who have *extensive apparatus and complex demands*. It requires capacity for transmitting and organizing vastly more information and programming than any one-channel transmission system can possibly convey at one time. It requires capacity for controlling intermediate transmission stations that receive information and programming from many sources and for organizing the information and programming and retransmitting the information and programming so as to make the use of the information and programming at ultimate receiver stations as efficient as possible.

(Spec. at 2 l. 25 through p. 3 l. 8)(emphasis added).

To disclose how the integrated system overcomes the identified limitations, solves the problems, and realizes this potential fully, requires *step-by-step teaching* of separate elements – methods as well as apparatus – of Applicants' disclosed system. At each new step, the *contextual relationship* of the new teaching to earlier teachings *is explicitly stated*. Applicants highlight below how this step-by-step teaching carries the relationships of the various separate elements throughout the disclosure.

(a) **“One Combined Medium” (pages 19-28)**

In a section, (Spec. at 19-28), entitled “One Combined Medium,” (Spec. at i l. 16 and p. 19 l. 5), which focuses on the subscriber station of Fig.1, Applicants begin by teaching “a *video/computer* combined medium,” (Spec. at 19 l. 6)(emphasis added). A local image – Fig. 1A (*See* Spec. at 25 ll. 9-14) – is provided at the subscriber station and combined with a remotely supplied video image – Fig. 1B (*See* Spec. at 25 ll. 30-33) – in order to deliver a combined image of Fig 1C (*See* Spec. at 26 ll. 8-15). (Simultaneously, user specific local images are provided at other subscriber station and combined with the remotely supplied video image – (*see*, specification at page 26 lines 16-19.)

(As an example of Applicants' step-by-step teaching approach, not until a section entitled “Audio Overlays and Other Overlays,” which begins on page 463, are Applicants prepared to focus on Fig. 7D and teach “a *radio/computer* combined medium,” (Spec. at 464 l. 6), or teach “a *broadcast print and computer* combined medium,” (Spec. at 466 l. 20), or focus on Fig. 7E and teach “the full combined medium of television and computers,” (Spec. at 468 ll. 10-11).

In the “One Combined Medium” section, Applicants disclose concepts of “a combining operation” and “synchronization”. For example: “subscriber station apparatus ... execute *a combining operation in synchronization....*” (Spec. at 26 ll. 21-22)(emphasis added).

Applicants also teach *order* of operations. For example, one operation. (Spec. at 24 ll. 5-27), may provide the local image—Fig. 1A—at the subscriber station; a different operation, (Spec. at 26 ll. 4-11), may deliver the combined image—Fig. 1C. (“One Combined Medium” also discloses that a third operation, (Spec. at 27 ll. 3-7), may terminate delivery of the combined image.)

More broadly, in “One Combined Medium” Applicants teach *important concepts regarding instructions* and, *most importantly, timing*. For example:

Decoder, 203, is **preprogrammed** to detect digital information Microcomputer, 205, is **preprogrammed** ... to respond ... to *instruction signals* embedded in the ... programming transmission.

(Spec. at 21 ll. 14-24)(emphasis added).

In said series in full--and in any one or more subsequent series of instructions--*particular instructions are separated*, as may be required, *by time periods when no instruction* that controls the microcomputer, 205, of any station *is transmitted* which periods allow sufficient time for the microcomputer, 205, of each and every subscriber station *to complete functions* controlled by previously transmitted instructions and commence waiting for a subsequent instruction, in a waiting fashion well known in the art, before receiving a *subsequent instruction*.

(Spec. at 22 ll. 9-18)(emphasis added).

... *an instruction* ... *causes* subscriber station apparatus to execute a combining operation in *synchronization*

(Spec. at 26 ll. 21-22)(emphasis added).

In addition, personalized programming is displayed *only when* it is of specific relevance to the conventional television programming of said combined medium. In the example, each subscriber views a graphic presentation of his own portfolio performance information *as soon as* it becomes specifically relevant to graphic information of the performance of the market as a whole. Prior to its time of specific relevance, no personalized information is displayed (despite the fact that said graphic information of the performance of the market as a whole is displayed). And said personalized information is displayed *only for so long as* it remains specifically relevant. *As soon as* its specific relevance terminates, its display terminates.

(Spec. at 27 ll. 21-33)(emphasis added).

In the "One Combined Medium" section, Applicants demarcate a critical type of instruction with a definition.

Hereinafter, an instruction ... that causes subscriber station apparatus to execute a combining operation ... is called a "combining synch command."
(Spec. at 26 ll. 20-23)(emphasis added).

Furthermore, in "One Combined Medium," Applicants teach a temporal relationship of combining synch commands that have specific functionalities. A *first combining synch command*, (See Spec. at 24 ll. 5-27 and p. 26 ll. 23-28), causes the local image—Fig. 1A—to be provided at the subscriber station. A *second combining synch command*, (See Spec. at 26 ll. 1-8 and 20-23), causes display of the combined image—Fig 1C. (Furthermore, a *third combining synch command*, (See Spec. at 27 ll. 3-7), terminates display of the combined image.) In their step-by-step teachings, Applicants *provide clear contextual pertinence of subsequent teachings by making explicit reference to* the "One Combined Medium" disclosure, and especially by *establishing the temporal relationships of subsequent teachings to the Fig.1C combining and the functionalities provided by these combining synch commands.*

- (b) "The Signal Processor" through "The Normal Transmission Location" (pages 28-86) and "The Preferred Configuration of Controller, 39, and SPAM-Controller, 205C." (pages 156-162)

In the specification at pages 28-86 and pages 156-162, Applicants teach apparatus and signaling techniques that are *used throughout the remainder of Applicants' disclosure*. Applicants teach Signal Processor, (Spec. at 28-34 and Fig.1); Signal Decoder, (Spec. at 34-38 and Figs.2A-2C); and Signal Processor System, (Fig.2D), apparatus. *Applicants also teach in detail the controller* (Spec. at 156-162 and Fig.3A) *apparatus of Signal Decoders* (e.g., controller, 39, in Fig. 2A). Applicants teach signaling techniques in sections entitled "The Composition of Signal Information ... Commands, Information Segments, and Padding Bits," (Spec. at 43-49), The

Organization of Message Streams ... Messages, Cadence Information, and End of File Signals,” (Spec. at 59-69), “Detecting End of File Signals,” (Spec. at 69-84), and “The Normal Transmission Location,” (Spec. at 84-86).

(c) **“Operating Signal Processor Systems ... Introduction”
through “Operating Signal Processor Systems ... Signal
Record Transfer” (pages 86-278)**

At specification pages 86-278, Applicants teach methods of operating the signal processing apparatus of pages 28-86 and 156-162 explicitly within the context of the “One Combined Medium” disclosure. For example:

Five examples illustrate methods of operating signal processing system apparatus. Each focuses on subscriber stations where the signal processor system of Fig. 2D and the *combined medium apparatus of Fig. 1* share apparatus and operate in common. Fig. 3 shows one such subscriber station.

(Spec. at 86 l. 32 through p. 87 l. 2)(emphasis added).

All five examples describe signal processing variations that relate to the Fig. 1C combining of “*One Combined Medium.*”

(Spec. 87 ll. 30-32)(emphasis added).

Each example focuses on the processing of the three signal messages of the Fig. 1C combining. The information of said messages include three combining synch commands and one program instruction set. The first message is of the information associated with the *first combining synch command*. Said first command has a “01” header, an execution segment, and a meter-monitor segment of six fields. Said command is followed by an information segment that contains said program instruction set, and said information segment is followed by an end of file signal. Said first command addresses URS microcomputers, 205, and causes said computers, 205, to load and run the program instruction set transmitted in the information segment.

(Spec. at 89 ll. 3-16)(emphasis added).

The second message is of the information associated with the *second combining synch command*.

(Spec. at 90 ll. 4-5)(emphasis added).

The third message is of the information associated with the *third combining synch command*.

(Spec. at 90 ll. 28-29)(emphasis added).

Repeatedly throughout each of the five examples, reference is made to pertinent "One Combined Medium" disclosures. For example, in Example #1, (Spec. at 93-143), Applicants state:

OPERATING SIGNAL PROCESSOR SYSTEMS ... EXAMPLE #1.

The first example elaborates on the Fig. 1C combining described above in "One Combined Medium" and focuses on the operation of decoder, 203, SPAM-controller, 205C, and microcomputer, 205, on the execution of controlled functions, and on the use of cadence information to organize signal processing. The example begins as divider, 4, starts to transfer to decoder, 203, in its outputted composite video transmission, the embedded binary information of the first message.

(Spec. at 93 ll. 20-29.)

As described in "One Combined Medium" above, loading and running said program instruction set causes microcomputer, 205, (and URS microcomputers, 205, at other subscriber stations) to place appropriate Fig. 1A image information at particular video RAM.

(Spec. at 107 ll. 20-24.)

In the foregoing fashion and as described in "One Combined Medium" above, said transferred information of the second combining synch command causes microcomputer, 205, to combine the programming of Fig. 1A and of Fig. 1B and transmit said combined programming to monitor, 202M, where Fig. 1C is displayed.

(Spec. at 125 l. 31 through p. 126 l. 1.)

Fig. 3 (which is the combination of the apparatus of Figs. 1 and 2D (See Spec. at 86 l. 32 *et seq.*)) and Fig. 3A (the controller in the decoders 30 and 203 in Fig. 3, (See Spec. at 156 l. 18 *et seq.*)) depict the receiver station at which all five examples occur. Example #1 discloses in detail transfer of SPAM messages to addressed apparatus at the receiver station as well as the execution of controlled functions in response to the messages. Example #2 discloses selective decryption of content of the SPAM message stream at decryptor 10 of signal processor 200. Example #3 discloses the creation of

signal records at signal processor 200 based on monitoring information contained in the message stream that delivers the Fig. 1C image. Example #4 discloses functioning of the Fig. 3A controller 39 in decoder 203, including selective decryption at decryptor 39K and additional processing of the message stream content to create signal records. Example #5 discloses the functioning of signal processor 200 components (e.g., 6, 1, 2, 3, 30 and 40) to gather data on the availability of programming (see, for example, page 269 line 6).

Pages of the specification 271-278, state: "In examples #3, #4, and #5, the transmission of SPAM signal information causes signal processor, 200, to transfer signal record information by telephone to remote station computers," (Spec. at 271 l. 33 *et seq.*) and teach this process in detail.

- (d) **"Regulating the Reception and Use of Programming ... including Example #6" and "... Example #7" (pages 278-312) as well as "... More on Example #7 ... Combining ... Automatically to the Computer System ..." (pages 427-447)**

At pages 278-312 of the specification, Applicants teach methods of governing the reception and use of programming and relate to, for example, "digital ... television transmissions," (See Spec. at 279 l. 14). Example #6 discloses a variant of the type of decryption techniques disclosed in examples #2 and #4 to regulate the use of control signal, in particular. Focusing on the receiver station of Fig. 4, (See Spec. at 286 l. 6 through p. 288 l. 20), example #7 discloses a multistage process of selectively decrypting digital components (video and audio) of a "television signal," (See Spec. at 288 ll. 32-33). The multistage process includes selective transfer, e.g., by tuning or switching, (Spec. at 295 ll. 6-30). At pages 427-447, additional regulating concepts are taught which are variants to the disclosure of pages 287-312, and which rely on disclosures (e.g., intermediate transmitter station automation, (Spec. at 324-390)) which occur in the specification between pages 312 and 427.

Just like every one of examples #1-#5, examples #6 and #7 (Spec. at 287-312 and 427-447) are disclosed within the context of the "Wall Street Week" program. With respect to example #6, see, for example, page 281 lines 7-9. With respect to example #7, see, for example, page 289 lines 12-27 and page 429 lines 26-33. The examples also disclosed functionally and temporally with respect to earlier disclosures such as in "One Combined Medium" at pages 19-28 (e.g., Spec. at 311 ll. 10-16 and p. 447 ll. 8-14).

(e) "Monitoring Receiver Station Reception and Operation" (pages 312-324)

At pages 312-324 of the specification, Applicants teach methods of monitoring the reception and operation of a receiver station using Fig. 5. Fig. 5 shows an extended system of monitoring decoder, controlled by signal processor 200, each monitoring an associated device and communicating monitor information to signal processor 200. This disclosure is also set within the context of the "Wall Street Week" program (See Spec. at 322 ll. 26-27), references Fig. 1B (Spec. at 322 l. 35), and cites previously defined portions of example #3, which concern monitoring (see Spec. at 322 ll. 30-35, p. 174 ll. 21-23, and p. 190 ll. 14-16).

(f) "Automating Intermediate Transmission Stations" (pages 324-390) including "Example #8" (pages 340-354)

At pages 324-390 of the specification, Applicants teach automation of intermediate stations. The teachings relate to forms of programming that include, but are not limited to, television, radio, and data and that apply to all manner of broadcast and cablecast operations (see Spec. at 324 ll. 11-17, p. 339 l. 9 through p. 340 l. 10, and p. 389 l. 14 through p. 390 l. 11). Figs. 6A-B illustrate Applicants' teachings in the setting of a cable television system. Generally speaking, apparatus of Figs. 6A-B are described at page 324 line 18 through page 328 line 17 and page 337 lines 1-24, and the basic methods of operation of the station (e.g., operating according to a complete programming

schedule) are disclosed at page 325 line 17 through page 326 line 18 and page 328 line 8 through page 331 line 16. Organizing units of prerecorded programming (e.g., to play according to schedule) is disclosed at page 331 line 17 through page 334 line 6. Playing according to schedule is disclosed at page 334 line 7 through page 336 line 35. Monitoring station operations is disclosed, *inter alia*, (e.g., to provide auditable proof-of-performance) at page 337 line 25 through page 339 line 8. In their teachings of organizing, playing and monitoring, Applicants introduce exemplary programming, including **program unit Q** which is a specific focus of later disclosures in Applicants' specification. Applicants teach the subject matter of pages 324-390 following pages 86-324 to make clear that the earlier teachings apply at intermediate transmission stations as well as end user stations, (e.g., Spec. at 339 l. 29 through p. 340 l. 10 and p. 389 l. 31 through p. 390 l. 11).

In example #8, Applicants teach a distribution station, such as a satellite uplink, which transmits control signals and units of programming, such as television spot commercials, to a plurality of automated intermediate transmission stations as taught at pages 324-340 (Spec. at 340 l. 13 through p. 345 l. 28). The intermediate transmission stations receive the control signals, (e.g., Spec. at 342 l. 18 through p. 343 l. 17 and p. 344 ll. 28-32), and the programming, and store and retransmit selected exemplary television spot commercials – **most focally program unit Q**, (e.g., Spec. at 343 ll. 5-17, p. 351 l. 27 through p. 352 l. 30, and p. 353 ll. 6-28), with each intermediate station operating independently and retransmitting its selected exemplary commercial(s) at different times and in different channels (Spec. at 343 l. 5 through p. 344 l. 22 and p. 345 l. 29 through p. 354 l. 3). The intermediate stations automatically retain and communicate proof-of-performance records to one or more remote auditing stations, (see Spec. at 341 ll. 11-15 and p. 352 l. 18 through p. 354 l. 3).

- (g) **Examples #9 and #10 (pages 354-390 & 469-516):
“Automating Intermediate ... Station Combined
Medium Operations” (pages 354-374 of Example #9)
and “Network Control of Intermediate Generating and
Embedding” (pages 374-390 of Example #10)**

In examples #9 and #10, at pages 354-374 of the specification for example #9 and pages 374-390 for example #10, Applicants teach automation of an intermediate station in creation and transmission of combined medium programming (“of the same sort as ‘Wall Street Week’” at page 355 lines 1-2). At pages 469-516, Applicants teach the corresponding operations of a plurality of end user stations to which the intermediate station transmits the programming so created. Both examples focus on **Program unit Q** (see Spec. at 354 l. 35 through p. 355 l. 14, p. 374 l. 29 through p. 375 l. 12, p. 469 ll. 1-2, and p. 478 ll. 23-26). In each example, Applicants teach a sequence of messages and carefully **name each message in the sequence with a name that ties together the transmitter functions of pages 354-390 and the corresponding end user station functions of pages 469-516 unambiguously.** (Appendix D, a Glossary of Defined Terms, is included herewith identifying certain terms and defined by their use in the instant specification.) For example, the “program-instruction-set message (#9)” is defined at page 371 lines 17-19 and transmitted at page 372 lines 4-6; the “program-instruction-set message (#10)” is defined at page 385 lines 14-16 and transmitted at page 386 lines 12-14; the “program-instruction-set message (#10)” is received at the end user station(s) at page 484 lines 5-14; and at page 514 lines 8-13, 17 and 23-24 Applicants teach that the “program-instruction-set message (#9)” “[causes] the same functioning” at the end user station(s) as the “program-instruction-set message (#10)”. Some of the other messages in the sequence are named at page 372 lines 20-35, page 387 lines 19-31, page 490 lines 24-34, page 492 lines 1-11, page 495 lines 1-10, etc., and page 514 lines 8-31.

At pages 354-374 in example #9, Applicants teach local **origination**, (Spec. at 374 l. 6 and p. 368 ll. 3-4), of combined medium programming at an automated transmitter station (which is also an intermediate transmission station). **Program unit Q,**

which is delivered to and handled at the intermediate station according to the teachings of pages 324-354, (Spec. at 355 ll. 15-17), is disclosed as television-based combined medium programming, (Spec. at 354 l. 35 through p. 355 l. 14), that contains embedded signals, (e.g., Spec. at 356 l. 9 through p. 358 l. 21, p. 367 ll. 30-33, p. 369 ll. 4-6, and p. 372 ll. 22-35). As one example of the creation of programming, at pages 359 line 14 through page 365 line 21, Applicants teach automation of the intermediate station to create a set of instructions (called "PROGRAM.EXE" at page 365 line 8 and defined as the "program-instruction-set of Q" at page 365 lines 18-21) and to transmit the instructions, (Spec. at 371 l. 11 through p. 372 l. 6), in a "program-instruction-set message," (Spec. at 371 ll. 17-19 and p. 372 ll. 4-6).

At pages 374-390 in example #10, Applicants teach **network origination** (Spec. at 374 ll. 20-31) of combined medium programming and focus especially on the creation of programing *in the network* at automated intermediate stations as well as at an origination station. **Program unit Q** in example #10 is the same program unit Q as in example #10 (Spec. at 375 ll. 7-8). In example #10 Applicants disclose the same creation of programming as in example #9. For example, page 377 line 4 through page 382 line 14 corresponds to page 358 line 26 through page 366 line 18; "PROGRAM.EXE" appears at page 379 line 24, page 380 line 18, and page 382 line 3; definitions of the "program-instruction-set of Q.1" and "program-instruction-set of Q.2" occur at page 378 lines 23-28 and at page 380 lines 20-24 respectively; and generated instructions are transmitted at page 385 line 9 through page 386 line 14 in a "program-instruction-set message." But in contrast to example #9 which focuses on origination at just one transmitter station, in example #10 Applicants teach a plurality of automated intermediate station operating in parallel under control of a network origination station to generate and transmit control instructions messages (*see* Spec. at 59 ll. 29-33) to different end user stations. Furthermore, Applicants teach that the control instructions differ from each

other (e.g., the PROGRAM.EXE files in the messages (Spec. at 484 ll. 9-10 and 17-18) differ (Spec. at 379 ll. 5-31 and p. 380 ll. 7-20)).

The end user station functionalities of examples #9 and #10 are disclosed at pages 469-516. Applicants teach a series of combined medium outputs (e.g., Spec. at 491 ll. 10-16 and p. 506 ll. 17-21) in response to the transmitted control instructions or "messages" (Spec. at 484 ll. 5-18, p. 485 ll. 14-18, p. 490 l. 24 through p. 491 l. 16, and p. 505 l. 32 through p. 506 l. 21). Furthermore, the information outputted in the combined medium outputs differs from end user station end user station (Spec. at 491 ll. 10-29 and p. 506 ll. 17-31). Applicants also teach in examples #9 and #10 *other functionalities, such a viewer interactivity and interactivity with stations remote from the end user stations*, that are discussed more fully below.

**(h) Automating Ultimate Receiver Stations (pages 390-427)
... Regulating Station Environment (pages 396-406) ...
Coordinating a Stereo Simulcast (pages 406-419) ...
Receiving Selected Programming (419-427)**

Focusing on Fig. 7, Applicants teach, at pages 390-396 of the specification, apparatus and functionalities of an end user station including computing, signal processing (e.g. Figs. 2-2D), switching, decrypting, etc., in addition to receivers, storage devices, and various speaker and display devices. On page 396 is additional disclosure associated with the preferred controller, 39, taught at pages 156-162. At pages 396-406, Applicants disclosure concepts associated with broadcast/cablecast control of end receiver station heating/cooling and mechanical systems as well as interactivity associated with, for example, utilities meter reading. At pages 406-419, Applicants teach coordinating separate systems under broadcast/cablecast control – in this case, controlling devices associated with television and radio to present a stereo simulcast – as well as monitoring the devices in order to provide records of the performance of the stereo simulcast and of other presentations at the end user station to a remote data collection

station. At pages 419-427, Applicants teach storing identifiers (e.g., of the stocks in a stock portfolio) and controlling the receiver station (e.g., tuning cable converter 222 at page 423 lines 11-13) to receive identified news at to process the news (e.g., Spec. at 425 ll. 30-34) according to pre-entered instructions of a user.

(i) **More Disclosure in the Context of "Wall Street Week"**
(pages 427-469)

Having taught basic concepts of apparatus and automation of ultimate receiver stations, Applicants teach more advanced concepts within the context of "Wall Street Week" and its many attendant earlier teachings. Applicants' objective, in so doing, is to **teach how the various teachings, attendant to "Wall Street Week", relate to each other.**

(j) **More on Example #7 (pages 427-447)**

At pages 427-447 of the specification, Applicants elaborate on the earlier "Regulating Systems" (Spec. at 288 l. 22) teachings of example #7 (Spec at 288-312), which are summarized in section (d) above. Applicants teach the network described in "One Combined Medium" (Spec. at 20 l. 28 through p. 21 l. 4) as a **self structuring, parallel processing computing system.** This teaching follows Applicants teaching of "Automating Intermediate Transmission Stations" (Spec. at 324 l. 7 and pp. 324-390) in order to **elaborate on intermediate transmission station** (e.g., see references to Fig. 6 at page 429 line 29 and page 325 lines 15-16) **automation** within the context of example #7 (e.g., Spec. at 429 l. 26 through p. 435 l. 15) and the teachings attendant to "Wall Street Week" generally. Applicants teach the selective processing of incoming programming in accordance pre-stored "program-unit-of-interest information" (e.g., Spec. at 428 ll. 21-26) that enables different viewer stations to handle differently (e.g., store/display, automatically authorize purchase of) the "Wall Street Week" programming. Applicants teach storage of programming (Spec. at 445 ll. 27-32) that includes (e.g., Fig. 1C) the

locally provided information (e.g., Fig. 1A) combined with the remotely supplied information (e.g., Fig. 1B).

(k) Controlling Combined Medium Operations (pages 447-457)

At pages 447-457 of the specification, Applicants teach the functioning of "One Combined Medium" (Spec. at 19-28) within the context (e.g., Spec. at 451 ll. 1-3) of functions that (i) precede (Spec. at 447 l. 26 through p. 451 l. 11) the beginning of the "One Combined Medium" programming (i.e., "Wall Street Week") and (ii) follow (Spec. at 451 l. 4 through p. 457 l. 10) the display of Fig. 1C. Applicants teach **providing and updating viewer data (e.g., stock portfolio data) before the start of**, for example, "Wall Street Week" and controlling viewer stations to generate and combine into the "One Combined Medium" programming **a series of local images with each image combined within its specific time interval of relevance**. Applicants also teach **error correction techniques for controlling viewer station computers that function incorrectly or inefficiently**.

(l) Transmitting Program Instructions Sets (pages 457-463)

Having taught generation of more than one image, inefficiency, and error correction, Applicants teach methods, at pages 457-463, for timely provision of software for controlling the generating and combining of local images (e.g., Fig. 1A) into the "One Combined Medium" programming. These include varying size of the bandwidth in which the software is located, as well as the location(s) and the timing pattern(s) in which the software is transmitted.

(m) Audio Overlays and Other Overlays (pages 463-468)

Focusing on Fig. 7D, Applicants teach a radio combined medium at pages 464-466 of the specification, including local selection at a radio receiver station of user

specific audio and insertion of the selected audio into radio programming supplied from a remote radio transmitter. Applicants teach a broadcast print combined medium at pages 466-468, including local selection at a broadcast print receiver station of user specific text and insertion of the selected text into broadcast print programming supplied from a remote transmitter. Focusing on Fig. 7E, Applicants teach at page 468 a television combined medium that includes customized audio as well as customized video.

**(n) Examples #9 and #10 Continued – Viewer/Listener
Station Functionalities (pages 469-516)**

To teach the viewer/listener station processing of **program unit Q** in examples #9 and #10 (*see* section (g) above), Applicants focus on the “ultimate receiver station” (defined at page 40 line 35 through page 41 line 1) of Fig. 7 (*e.g.*, Spec. at 390 ll. 30-31 and p. 470 l. 9). Having taught the concepts summarized in section (m) above, Applicants can teach receiver stations interconnecting “apparatus ... in the fashion of Fig. 7E” (Spec. at 480 ll. 16-17). In this environment, Applicants teach local interactions (*e.g.*, by humans at page 471 lines 6-18 and page 508 line 19 through page 509 line, and by equipment at, for example, page 484 lines 7-18 and page 509 line 35 through page 511 line 22) result in interaction between local station and remote station equipment (*see* Spec. at 509 l. 35 through p. 510 l. 4). Drawing on virtually every previous teaching, Applicants disclose at pages 469-516 generation of a series of outputs (*e.g.*, Spec. at 485 ll. 14-18) that include video (*e.g.*, Spec. at 491 ll. 10-29), audio (Spec. at 491 l. 30 through p. 493 l. 22), and print (Spec. at 496 l. 3 through p. 499 l. 3). Applicants also disclose error correction, as summarized in the section above, at page 514 line 32 through page 516 line 13. Furthermore, Applicants disclose at page 514 lines 8-31 that the viewer/listener stations perform substantively identically in examples #9 and #10.

(o) **Preprogramming Receiver Station Operating Systems
(pages 516-532) and The Preferred SPAM Header
(pages 532-533)**

At pages 516-532 of the specification, Applicants teach one master control station (e.g., Spec. at 518 ll. 17-26) transmitting operating system instructions to and programming transmitter and receiver station widely dispersed over a geographic area with the operating systems. Each station to be programmed selects those operating system instructions that apply to its particular type and version of reprogrammable device(s) (e.g., Spec. at 522-524), routes the instructions to memory of the reprogrammable device(s), and commences operating under control of the operating system instructions. At pages 532-533, Applicants further focus on the desirability of flexibility for system expansion and teach that the preferred SPAM header is one byte in length.

(p) **The General Case ... Summary Example #11 (pages 533-557)**

While Applicants could summarize their disclosure by simply stating that each method and feature of their disclosed "unified system" (Spec. at 533 l. 24) could be combined with every other method and feature (on its face an apparent tautology), they choose, instead, to provide one final example which explicitly relies on the entirety of foregoing disclosure. In example #11, programming is distributed in a time cycling fashion (e.g., Spec. at 536 l. 11 *et seq.* and p. 556 ll. 12-14) from a European master control station via satellite (Spec. at 536 ll. 4-6) to national intermediate transmission stations (Spec. at 534 ll. 26-31) which transmit to local intermediate transmission station (Spec. at 535 ll. 18-22) which, in turn, transmit to ultimate receiver stations (Spec. at 534 ll. 1-4) where programming is displayed (e.g., Spec. at 552 ll. 20-30) and information is communicated responsively (e.g., Spec. at 555 ll. 14-29) back to the European master control station and the national and local intermediate stations (Spec. at 555 l. 26 through p. 556 l. 9).

The European master control station controls the national intermediate stations (e.g., Spec. at 541 l. 29 through p. 542 l. 2 and p. 543 ll. 20-29) to control the local intermediate stations (e.g., Spec. at 544 l. 23 through p. 545 l. 11) to control the ultimate receiver stations (e.g., Spec. at 547 ll. 19-26 and p. 548 ll. 1-6). User specific information is generated at each ultimate receiver station (e.g., Spec. at 548 ll. 18-22 and p. 550 ll. 30-31), stored at each ultimate receiver station (e.g., Spec. at 551 ll. 11-14), explained in combined medium output (Spec. at 552 ll. 17-30), and communicated to the European master control station and the national and local intermediate stations (Spec. at 555 l. 26 through p. 556 l. 9). At points in the disclosed example #11 cycle where functions are described in general, reference is made to earlier sections of the specification that teach the detail of how the function is performed. For example, at page 537 lines 6-17, the European master control station is explicitly disclosed as preprogramming the national and local intermediate stations and the ultimate receiver stations in the fashion summarized in the above section.

(q) Conclusion

As demonstrated above, within the specification, many embodiments of the claimed invention are disclosed. Each manifestation of an apparatus or method that includes the subject matter defined by the instant claims is a *single* embodiment of Applicants' invention. Such a single embodiment of Applicants' invention may have elements or steps that are described in detail in various separate sections of the instant specification. Every embodiment of the instant invention that is described by the specification as a whole is a *single* embodiment of the instant invention that provides support under the written description requirement.

It appears, however, that what the Examiner intends to request is that Applicants provide support for every limitation of an individual claim from within a single one of the detailed enumerated examples listed in the specification. In other words, the Examiner

requests that the support provided for all the limitations of an individual claim be contiguous or proximate within *only a portion* of the specification, rather than the specification as a whole. The written description requirement of 35 U.S.C. § 112 does not mandate such contiguous or proximate descriptions of each element or step of every individual claim.

“To fulfill the written description requirement, a patent specification must describe an invention and do so in sufficient detail that one skilled in the art can clearly conclude that the ‘inventor invented the claimed invention.’” *Regents of University of California v. Eli Lilly and Co.*, 119 F.3d 1559, 43 U.S.P.Q.2d 1398, 1404 (Fed. Cir. 1997)(quoting *Lockwood v. American Airlines*, 107 F.3d 1565, 41 U.S.P.Q.2d 1398, 1405 (Fed. Cir. 1997)). Applicants submit that one of ordinary skill in the art would determine that the inventors possessed the claimed invention by recognizing that the embodiments indicated in Appendix A are described in the specification. Since, for the reasons discussed above, one of ordinary skill in the art would recognize that the specification is a single cohesive document containing many descriptions of methods and apparatus included in general integrated systems, there is no reason that the entire support for each individual claim must come from within a single detailed enumerated example described in the specification. However in order to advance the prosecution of the instant application, Applicants have selected embodiments for inclusion in Appendix A that include elements and steps described primarily in a single enumerated example of the specification.

(r) The Subject Matter in the ‘81 Disclosure is Specifically Included In the Instant Specification

Applicants recognize that they must convey that they were in possession of the invention as of the effective filing date of November 3, 1981. Applicants also recognize that the claim of priority under 35 U.S.C. § 120 requires that the previously filed application disclose the invention in the manner provided by the first paragraph of 35

U.S.C. § 112. Accordingly, throughout the prosecution of the pending claims, Applicants have provided support based on the application filed November 3, 1981. Applicants also submit herewith, in Appendix A, support for each claim limitation from the application filed November 3, 1981. Applicants respectfully submit that the detailed support provided in Appendix A demonstrates full compliance with the written description requirement of 35 U.S.C. § 112, first paragraph, and the related requirement of 35 U.S.C. § 120. Additionally, Applicants submit Appendix C herewith, to provide a correlation between the 1981 priority specification (as referenced the column and line numbers of Applicants' U.S. Pat. No. 4,694,490) and the instant specification, and Appendix D containing a Glossary of Defined Terms with respect to the instant specification.

In the Office Action at page 5, the Examiner seeks an explanation for how the '81 disclosure can be considered the specification support. The subject matter in the '81 disclosure is clearly included in the instant specification as demonstrated by Appendix C. Applicants respectfully assert that one skilled in the art, upon recognizing a description of the invention in the '81 disclosure, would readily recognize a description of the invention in the instant specification. The Examiner merely states at page 3 of the Office Action that the previously provided support does not cite the sentences, paragraphs, or passages of the instant specification. Applicants submit that the support provided in Appendix A demonstrates that the instant specification describes the subject matter that is originally disclosed in the '81 application and is presently claimed.

Applicants clarify that the instant specification does not include a verbatim duplication of the '81 disclosure. However, Applicants maintain that the subject matter in the '81 disclosure is specifically included in the instant specification. Neither 35 U.S.C. § 112 nor 35 U.S.C. § 120 requires that the parent application be incorporated into the pending application either by reference or by verbatim repetition. "In order to determine whether a prior application meets the 'written description' requirement with respect to later-filed claims, the prior application need not describe the claimed subject

matter in exactly the same terms as used in the claims; it must simply indicate to persons skilled in the art that as of the earlier date the applicant had invented the what is now claimed." *Eiselstein v. Frank*, 52 F.3d 1035, 34 U.S.P.Q.2d 1467, 1470 (Fed. Cir. 1995)(citation omitted)(quoting *Vas-Cath v. Mahurkar*, 935 F.2d 1555, 1561, 19 U.S.P.Q.2d 1111, 1116 (Fed. Cir. 1991)). Applicants respectfully submit that the support cited in Appendix A demonstrates that the '81 disclosure indicates to persons skilled in the art that as of November 3, 1981, Applicants had invented what is now claimed.

(3) 35 U.S.C. § 112 Includes No Requirement That Identical Embodiments of the Invention be Described in Both a Parent Application and a Subsequent Application Claiming Priority Therefrom

As discussed above, there are many embodiments of the claimed invention disclosed in the specification in such full, clear, concise, and exact terms that one skilled in the art would clearly conclude that Applicants invented the claimed invention as of the effective filing date of the application. There is no conflict or discrepancy for Applicants to refer to one embodiment at one point during the prosecution of the instant application and to refer to another embodiment at a different point. Applicants may independently rely on various embodiments of the claimed invention to demonstrate support under the written description requirement. Likewise, there is no requirement in either 35 U.S.C. § 112 or 35 U.S.C. § 120 that identical embodiments of the invention be described in both a parent application and subsequent application claiming priority therefrom. As noted above, "the prior application need not describe the claimed subject matter in exactly the same terms as used in the claims; it must simply indicate to persons skilled in the art that as of the earlier date the applicant had invented the what is now claimed." *Eiselstein v. Frank*, 52 F.3d 1035, 34 U.S.P.Q.2d 1467, 1470 (Fed. Cir. 1995)(citation omitted)(quoting *Vas-Cath v. Mahurkar*, 935 F.2d 1555, 1561, 19 U.S.P.Q.2d 1111, 1116 (Fed. Cir. 1991)). "[I]psis verbis disclosure is not necessary to satisfy the written

description requirement of section 112. Instead, the disclosure need only reasonably convey to persons skilled in the art that the inventor had possession of the subject matter in question." *Fujikawa v. Wattonasin*, 39 U.S.P.Q.2d 1895, 1904 (Fed. Cir. 1996)(quoting *In re Edwards*, 568 F.2d 1349, 1351-52, 196 U.S.P.Q 465, 467 (C.C.P.A. 1978)). Applicants may rely on different embodiments at different times to show that the disclosure conveys to those skilled in the art that Applicants had possession of the claimed subject matter. Applicants respectfully submit that such use of multiple embodiments is permissible to demonstrate compliance with the written description requirement of 35 U.S.C. § 112. However, where clarity permits, Applicants have selected similar embodiments from both the '81 disclosure and the instant specification for inclusion in Appendix A to demonstrate compliance with the written description requirement.

(4) Conclusion

The Examiner has failed to establish a *prima facie* rejection under the written description requirement of 35 U.S.C. § 112, first paragraph, because no reasons are given as to why one skilled in the art would not consider the description sufficient. The Examiner also asserts that there is a lack of continuity between the disclosure in the application filed November 3, 1981 and the instant specification. Applicants maintain that, although the '81 disclosure is not included in identical words in the instant specification, the subject matter of the '81 disclosure is included in the instant specification. Furthermore to demonstrate support for the instant claims, submitted herewith, in Appendix A, are tables demonstrating support for each claim from both the '81 disclosure and the instant specification. In view of the above arguments and Appendices A, C & D, Applicants respectfully request that the rejection under the written description requirement of 35 U.S.C. § 112, first paragraph be withdrawn.

b) The Specification Enables One Skilled in the Art to Make and Use the Invention

The Examiner rejects claims 2-14 & 16-302 under the enablement requirement of 35 U.S.C. § 112, first paragraph. (Office Action at 5.) The Examiner concludes that the handling/transmission of "digital television signals" is not enabled by the specification. (Office Action at 1-108.) The Examiner also concludes that "data" could not be processed in the same manner as television and radio programming units. (Office Action at 114.) However, these conclusions are not directed specifically to the invention claimed by the presently pending claims.

The test for enablement is whether one reasonably skilled in the art could make or use the invention from the disclosure in the application coupled with information known in the art without undue experimentation. *United States v. Teletronics, Inc.*, 857 F.2d 778, 785, 8 U.S.P.Q.2d 1217, 1223 (Fed. Cir. 1988). The invention is defined by the claims presented in the instant application. The Examiner concludes that the terms "digital" and "data" are not enabled. The Examiner fails to consider how these terms define Applicants' invention in the instant claims. The Examiner has failed to include any analysis of whether any particular claim is supported by the disclosure. The PTO bears the initial burden of setting forth a reasonable explanation as to why it believes that the scope of protection provided by each claim is not adequately enabled by the description of the invention provided in the specification of the application. *In re Wright*, 999 F.2d 1557, 27 U.S.P.Q.2d 1510, 1513 (Fed. Cir. 1993) The Examiner has failed to consider the scope of protection provided by the claims in his analysis under the enablement requirement. Therefore, the Examiner has failed to establish a *prima facie* rejection under the enablement requirement of 35 U.S.C. § 112, first paragraph.

The Examiner suggests Applicants enumerate which claim trees are directed toward an '81 embodiment and which are directed toward an '87 embodiment. In Part a)(2)(r) above, Applicants have fully addressed this ground of rejection in the context of

the written description requirement. Applicants maintain that each pending claim defines an invention that has embodiments described in both the application originally filed November 3, 1981, and the instant specification. The Examiner has failed to determine that one reasonably skilled in the art could not make or use the invention by the conclusion that the claims "seem to mix and match '81 and '87 disclosed embodiments." Therefore, the Examiner has failed to establish a proper rejection under the enablement requirement of 35 U.S.C. § 112, first paragraph.

(1) "Digital" is Enabled by the Specification

Claims 2-14 & 16-302 stand rejected under 35 U.S.C. § 112, first paragraph, because the Examiner alleges these claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. (Office Action at 108.) The Examiner asserts the specification fails to disclose the manner in which digital television signals are formatted and processed. The Examiner acknowledges that the transmission of digital television signals was known in the art. The rejection is based on the assertion that the transmission of digital television signals was not interchangeable with the transmission of analog television signals and the Examiner's conclusion that Applicants' disclosure assumes that they are interchangeable. This reasoning is an insufficient basis for the rejection of claims 2-14 & 16-302 for at least two reasons. First, the Examiner's discussion of the transmission and formatting of digital television signals is not directed to the scope of claims 2-14 & 16-302. Second, the means needed to format and transmit digital television signals in a manner compatible with all the methods and apparatus disclosed in the specification was known by those skilled in the art.

Claims 2-14 & 16-302 are fully enabled by the specification. The following claims are the only instances in the instant application that specify "digital", i.e.:

Claim 34, "digital television signal,"

Claim 111, "digital data,"

Claim 117, "digital television signal,"

Claim 144, "digital information,"

Claim 145, "digital information," and

Claim 248, "digital information."

See Appendix A for specification support for claim 70.

Notwithstanding the above arguments, Applicants recognize that the invention defined by the aforementioned claims are compatible with the use of digital television signals. The handling and transmission of digital television signals in a manner compatible with the methods described in the specification were well known to those skilled in the art as of the filing date of the instant application. The Examiner requests Applicants to submit references which show that the means needed to format and transmit "digital television signals" were known to those skilled in the art. Applicants submit that U.S. Patent No. 3,906,480 issued on September 16, 1975 to Schwartz et al. discloses the means needed to format and transmit "digital television signals" in a manner compatible with the methods described in the specification. Schwartz et al. discloses decomposing vectors to be displayed into elemental vector segments that are *encoded* as vector symbols. Schwartz et al. further discloses that the system has the capability of storing each vector in a compacted (i.e. compressed) form while retaining its attributes and identity in storage. Applicants contend that the specification discloses the usage of digital data in a television signal similar to that which is disclosed in Schwartz et al. The means needed to format and transmit digital television signals in this manner were well known to those skilled in the art as of the filing date of this application.

The Examiner has failed to construe the claims in his analysis under the enablement requirement. The Examiner directs his analysis to the term "digital television signals," but fails to demonstrate how this analysis applies to the aforementioned claims.

Furthermore, means compatible with Applicants' disclosure of formatting and transmitting digital television signals were well known in the art, contrary to the Examiner's assertion. For at least these reasons, Applicants respectfully request the withdrawal of the rejection of aforementioned claims under the enablement requirement of 35 U.S.C. § 112, first paragraph.

(2) "Data" is Enabled by the Specification

Claims 2-14 & 16-302 and all claims depending therefrom stand rejected under 35 U.S.C. § 112, first paragraph, because the Examiner alleges these claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. (Office Action at 114.) The Examiner notes that the specification discloses that SPAM messages can be embedded within the "normal locations" of "other media" such as broadcast data or print. The Examiner also notes that the specification discloses that print or data information is transmitted within SPAM messages. Applicants acknowledge the disclosure from line 6 of page 85 through line 11 of page 86 of the instant specification, which describes that SPAM signals may accompany conventional print or data programming. It is unclear to what specific disclosure the Examiner refers by the specific citations recited on pages 116-118, and in the footnote on page 117 of the Office Action. The Examiner asserts that these disclosures are so contradictory that one of ordinary skill in the art would need to resort to undue experimentation to practice the invention. (Office Action at 116.) Applicants firmly assert that a thorough reading of the specification shows that the disclosure is in no way contradictory with respect to the term "data."

Applicants disclose the use of SPAM signals to control and coordinate a wide variety of subscriber stations. (Spec. at 40.) The information of SPAM signals includes data, computer program instructions, and commands. (Spec. at 41 ll. 20-21.) One typical

example of the composition of a SPAM signal is shown in Figure 2E. (Spec. at 44.) The specification clearly discloses that SPAM signals may include information segments. (Spec. at 44 l. 11.) Program instruction sets, intermediate generation sets, other computer information, and data may all be transmitted in information segments. (Spec. at 53 l. 34 through p. 54 l. 2.) Applicants disclose that SPAM signals can be embedded in many different locations in electronic transmissions. (Spec. at 85 ll. 6-7.) In broadcast and data communications transmissions, SPAM signals can accompany conventional print or data programming in the conventional transmission stream. (Spec. at 85 ll. 20-23.) More precisely, the conventional print or data information may be transmitted in an information segment of a SPAM signal. (Spec. at 86 ll. 1-11.) Thus, SPAM signals can be included in broadcast print and data communication transmissions. Also, conventional data information can be transmitted in an information segment of a SPAM signal. There is no conflict in this disclosure. Any person skilled in the art would be enabled to use SPAM signals to control and coordinate a subscriber station through a broadcast data communication transmission by reading the instant specification. After thoroughly reading the specification any person skilled in the art would require no undue experimentation to practice Applicants' claimed invention.

The Examiner asserts that Applicants' disclosure did not describe a system or method which formatted, transmitted, received, processed, or displayed data program units under control of associated SPAM messages because data program units were actually transmitted with the SPAM messages. (Office Action at 117.) The Examiner extends this conclusion to hold that the disclosure fails to set forth the means or steps needed to make or use systems in which data is manipulated in the same manner as described for television and radio television program units. (Office Action at 118.) The Examiner's conclusion fails to follow from the stated facts. Data program units transmitted with SPAM signals can be manipulated under the control of the associated SPAM signal. The fact that data are disclosed as transmitted in the information segment

of SPAM signals in no way conflicts with disclosed control of such transmissions through the use of the SPAM signals.

Furthermore, at most the Examiner's conclusion applies to data communication transmissions that are controlled through the use of SPAM signals accompanying data programming. However, the Examiner makes no attempt to construe the claims to determine how this rejection applies to the scope of each claim. Assuming *arguendo* that the Examiner's reasoning is correct, every use of the term data does not violate the enablement requirement of 35 U.S.C. § 112. Applicants recognize that the pending claims set forth an invention that may be used with broadcast print or data communications transmissions. However, Applicants submit that the instant rejection does not directly apply to the following claim limitations:

Claim 2, "input data stream,"

Claim 21, "at least one subscriber station specific data,"

Claim 22, "at least one of specific mass medium programming, data, ...,"

Claim 29, "user data of interest,"

Claim 30, "viewer data of interest," "additional data besides said viewer reaction," and "data of one of (i) the availability, (ii) use and (iii) usage of one of programming data...,"

Claim 41, "one data that one of designates one of a time and a channel of transmission of said instruct signal,"

Column 44, "storing data,"

Claim 61, "storing user data," and "stored user data of interest,"

Claim 62, "viewer data of interest," "additional data besides said viewer reaction," and "data of the availability, use or usage of programming,"

Claim 73, "storing user data," and "portion of data,"

Claim 75, "viewer data of interest,"

Claim 78, "additional data besides said viewer reaction,"

Claim 80, "data of one of the availability, use, and usage of said one of said mass medium programming,"

Claim 90, "receiver specific data,"

Claim 91, "at least one receiver specific data,"

Claim 95, "supplier of data," and "unique identifier datum,"

Claim 100, "detected data,"

Claim 102, "communicate one of data and instructions,"

Claim 111, "communicate one of data and instructions,"

Claim 130, "a source or supplier of data,"

Claim 148, "identifying data from a subscriber station," and "at least one of code and data,"

Claim 149, "receiving one of said specific mass medium programs, data, ...,"

Claim 154, "data to serve as evidence,"

Claim 210, "user data of interest,"

Claim 211, "user data of interest,"

Claim 212, "subscriber data of interest," "assembling a record that includes data," "data regarding at least one of the availability, use and usage of at least one of said television programming and said image to said computer,"

Claim 216, "user data,"

Claim 220, "stored user data,"

Claim 221, "electronic data,"

Claim 231, "a source or supplier of data,"

Claim 240, "selected data,"

Claim 241, "select one or more units of data," and "selection of a particular unit of data,"

Claim 242, "availability of some data,"

Claim 245, "stores data,"

Claim 248, "preprogrammed data," and "passed data,"

Claim 254, "specific data of said communicated evidence information,"

Claim 257, "receiver specific data,"

Claim 289, "receiver specific data," and "receiving data from each of said plurality of receiver stations," and,

Claim 302, "a source or supplier of data."

For at least the above reasons, Applicants submit that the subject matter defined by claims as listed above is described in the specification in such a way to enable any person skilled the art to make or use Applicants' invention. Accordingly, Applicants respectfully request that the rejection of these claims be withdrawn.

**c) The Best Mode of Practicing the Claimed Invention
Contemplated by Applicants is Disclosed in the Specification**

Claims 2-14 & 16-302 stand rejected under 35 U.S.C. § 112, first paragraph, because it is asserted that the best mode contemplated by the inventor has not been disclosed. (Office Action at 118.) The first paragraph of 35 U.S.C. § 112 provides that the specification "shall set forth the best mode contemplated by the inventor of carrying out his invention." A two step inquiry is used to determine if the best mode requirement is met. *Chemcast Corp. v. Arco Industries Corp.*, 913 F.2d 923, 16 U.S.P.Q.2d 1033,1036 (Fed. Cir. 1990) First, the Examiner must determine whether, at the time Applicants filed their patent application, they knew of a mode of practicing the claimed invention that they considered to be better than any other. *Id.* Second, the Examiner must determine whether the disclosure is adequate to enable one skilled in the art to practice the best mode, if one was known to Applicants. *Id.* This inquiry is designed to preclude applicants from concealing preferred embodiments of their inventions which they have conceived. *Id.* The Examiner has failed to apply this test in rejecting the pending claims under the best mode requirement. The Examiner has failed to present evidence that Applicants concealed any embodiment of their invention which they considered to be

better than the embodiments disclosed in the instant specification. Therefore, Applicants respectfully request the withdrawal of the rejection of claims 2-14 & 16-302 under the best mode requirement of 35 U.S.C. § 112, first paragraph.

The Examiner compares the present case to *In re Ruschig*, 379 F.2d 990, 154 U.S.P.Q. 118 (C.C.P.A. 1967). The misapplication of *Ruschig* by the Examiner cannot substitute for the two step inquiry to be applied under a proper best mode analysis. The reasoning applied in *Ruschig* is inapplicable to the best mode rejection made by the Examiner in the instant case. First, the issue in *Ruschig* was whether a claim was supported by the disclosure of the appellants' application. *Id.* 154 U.S.P.Q. at 119. The analysis in *Ruschig* by the United States Court of Customs and Patent Appeals does not address the best mode requirement. Second, the *Ruschig* analysis is inapplicable to the facts in the instant case. In *Ruschig*, a claimed specific species of a genus of chemical compounds was not named or identified by formula in the specification. *Id.* 154 U.S.P.Q. at 121. The issue was whether the disclosure of the genus along with teachings of a number of other species would lead one skilled in the art to the claimed species. The Court held that the disclosure in *Ruschig* failed to include guides directing the selections required to arrive at the claimed compound rather than any of the many other compounds that could also be made within the genus. *Id.* 154 U.S.P.Q. at 123. The Court employed the analogy of travel through a forest. The Court found that the appellants were pointing to trees, but that there were no blaze marks to single out the trees that led to the unnamed compound. *Id.* 154 U.S.P.Q. at 122. The facts in *Ruschig* are in direct contrast to the present case. In *Ruschig* the claim limitation was *not* named or identified in the specification. In the instant case the Examiner acknowledges that Applicants' disclosure addresses the variety of claim limitations included in the claims. (Office Action at 121.) As the claim limitations are addressed by the instant specification, no blaze marks are required to lead a skilled artisan through a forest of possibilities to find them.

The Examiner asserts that he cannot recognize the pending claimed processes within the "woods." (Office Action at 121.) In response, Applicants have provided detailed support for each claim limitation. Applicants find it disingenuous for the Examiner to now assert that somehow Applicants have erred by describing numerous specific claim limitation details (*i.e.* pointing to the trees that make up the Examiner's woods.)

The Examiner asserts that there is a scattering of teachings across the multiple applications in the chain of continuity of the ancestor applications relied upon by the claim of priority in the instant application. (Office Action at 121.) The Examiner concludes that this scattering constitutes either (1) concealment of the best mode, or (2) a failure to meet the written description requirement. For the reasons set forth above in Part a), Applicants have fully complied with the written description requirement. Also as explained above in Part a), there is no scattering of teachings across applications. The instant application is a proper continuation application of Application No. 096,096, filed September 11, 1987, which in turn is a proper continuation-in-part of Application No. 317,510, filed November 3, 1981. The instant disclosure is substantially identical to the disclosure of Application No. 096,096 (the '87 disclosure.) The instant disclosure includes substantially all the subject matter in the disclosure of Application No. 317,510 (the '81 disclosure) and adds considerable details and improvements to the methods and apparatus disclosed therein. There is no scattering of teachings across these disclosures as asserted by the Examiner.

The Examiner confusingly questions whether Applicants disclosed their best mode in relation to the terms "data," "pending claim processes as a whole," and "digital." In accordance with M.P.E.P. § 2165.03, the Examiner should assume that the best mode is disclosed unless there is evidence to the contrary. The Examiner points to no evidence indicating Applicants contemplated a best mode of carrying out the claimed invention that they have failed to disclose. That the Examiner questions whether the best mode is

disclosed with respect to the "pending claim processes as a whole" is not evidence that Applicants concealed the best mode. With respect to the terms "data" and "digital," the Examiner has utterly failed to apply the first step of the proper best mode analysis. The Examiner has failed to determine that Applicants knew that one mode was better than another. Therefore, the Examiner has failed to establish a proper best mode rejection. Applicants note that this best mode rejection appears to be a repetition of the enablement rejection, which asserts that no embodiment of Applicants invention claimed using the terms "data" or "digital" is adequately disclosed. The enablement rejection is fully addressed in Part b) above.

The Examiner has failed to apply the proper analysis in rejecting claims 2-14 & 16-302 under the best mode requirement of 35 U.S.C. § 112. The Examiner has failed to determine whether Applicants knew that one mode was better than another at the time the application was filed. Thus, the Examiner cannot determine whether the disclosure is adequate to enable one of ordinary skill in the art to practice the best mode. As the Examiner has failed to establish a proper rejection under the best mode requirement, Applicants respectfully request that these rejections under 35 U.S.C. § 112, first paragraph, be withdrawn.

2. The Claims Comply With 35 U.S.C. § 112, second paragraph

Claims 2-14 & 16-302 stand rejected under 35 U.S.C. § 112, second paragraph. (Office Action at 5 & 123.) The second paragraph of 35 U.S.C. § 112 mandates that the specification conclude with claims that meet two requirements. First, the claims must set forth the subject matter that Applicants regard as their invention. Second, the claims must be definite. The legal standard for definiteness is whether a claim reasonably apprises those of skill in the art of its scope. *In re Warmerdam*, 33 F.3d 1354, 31 U.S.P.Q.2d 1754, 1759 (Fed. Cir. 1994). When rejecting any claim, the Examiner is required to state the reason for such rejection. 35 U.S.C. § 132. Section 132 is violated

when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection. *Chester v. Miller*, 906 F.2d 1574, 1578, 15 U.S.P.Q.2d 1333, 1337 (Fed. Cir. 1990). Applicants submit that the Office Action fails to demonstrate that any claim is directed to subject matter that Applicants do not regard as their invention. The Office Action also fails to demonstrate that any claim fails to reasonably apprise those of skill in the art of its scope. Applicants, therefore, respectfully request the withdrawal of these rejections under 35 U.S.C. § 112, second paragraph.

Claims 2-14 & 16-302 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. This rejection is directed to the terms “programming” and “programming.” No further reasons are given to support this rejection. The Examiner utterly fails to indicate why any claim fails to reasonably apprise those of skill in the art of its scope. This rejection is so uninformative that it prevents Applicants from recognizing and seeking to counter the grounds for rejection and is therefore invalid under 35 U.S.C. § 132. Accordingly, Applicants respectfully request that this rejection be withdrawn. The claim language “programming” and is address below in Part b).

a) The Claims Define That Which Applicants Regard as Their Invention

Claims 2-14 & 16-302 stand rejected under 35 U.S.C. § 112, second paragraph, because the Examiner asserts that the claims fail to set forth the subject matter which Applicants regard as their invention. (Office Action at 123.) The Examiner requests “to remove all claim terms from pending claims when [their] conceptual meanings are not identical.” This logic is incorrect for the reasons given in Part 1.a)(2)(r) above, in which Applicants maintain that the subject matter in the ‘81 disclosure is specifically included in the instant specification.

Furthermore, the Examiner has merely pointed to evidence that Applicants believe that the claims are supported by the ‘81 disclosure. The conclusion that the claims fail to set forth subject matter which Applicants regard as their invention simply does not follow

from the fact that Applicants believe that the claims are supported by the '81 disclosure. Applicants believe that the claims define an invention that is fully disclosed in both the '81 disclosure and the instant specification. The Examiner has failed to point to any evidence indicating that Applicants regard the invention to be something other than what is defined by the claims. As Applicants have consistently regarded the subject matter defined by the instant claims to be their invention, Applicants respectfully request the withdrawal of this rejection of claims 2-14 & 16-302 under 35 U.S.C. § 112, second paragraph.

**b) There is no discrepancy in the use of the term
"Programming"**

In considering claims, the Examiner suggests that the Applicants' use of the term "programming" in the pending claims is "repugnant to the normal/usual use of said terminology." (Office Action at 96.) The Examiner further suggests that, in the '81 disclosure (in the Parent Application No. 317,510 filed November 3, 1981), the Applicants defined the term "programming" as "everything transmitted over television or radio intended for communication of entertainment or to instruct or inform." The Examiner relies on the definition of programming set forth in the abstract of the disclosure. "The purpose of the Abstract is to enable the Patent and Trademark Office and the public generally to determine quickly from a cursory inspection the nature and gist of the technical disclosure. The abstract shall not be used for interpreting the scope of the claims." 37 C.F.R. § 1.72(b). By properly making reference to the whole specification, the Examiner will get a more complete understanding of Applicants' meaning of the term "programming".

"It is the object of this invention to unlock this potential [for a significant increase in the scope and scale of multi-media and multi-channel presentations] by the development of means and methods which permit progra[m]ming to communicate with equipment that is external to television and radio receivers, particularly computers and

computer peripherals such as printers.” “It is the further purpose of this invention to provide means and methods to process and monitor such transmissions and presentations at individual receiver sites and to control, in certain ways, the use of transmitted progra[m]ming and the operation of certain associated equipment. Such receiver sites may be stations or systems that intend to retransmit the progra[m]ming, or they may be end users of the progra[m]ming. The present invention contemplates that certain data may be encrypted and that certain data collected from such processing and monitoring will automatically be transfer[r]ed to a remote geographic location or locations.” U.S. Patent No. 4,694,490, col. 1, ll. 22-24, 36-53.

Applicants contend that the definition of “programming”, to include television and radio entertainment information, computer programming and data to control execution of a processor, in the present application is clearly supported by the definition of the term “programming” in the ‘81 disclosure.

Applicants assert that their use of the term “programming” in the present application is both consistent with normal/usual usage and with the parent application. *Webster’s Seventh New Collegiate Dictionary* (1977) gives separate definitions for the noun and verb forms of “programming”. The noun form of “programming” is defined with a series of gerunds:

“programming or programing ... n : the planning, scheduling, or performing of a program.”

And the noun form of “program”, which includes the word “programming” in its definition, is:

“program or programme ... n ... 1 ... : a public notice **2 a :** a brief usu. printed outline of the order to be followed, of the feature or features to be presented, and the persons participating (as in a public exercise, performance, or entertainment) **b :** the performance of a program; *esp :* a performance broadcast on radio or television **3 :** a plan or system under which action may be taken toward a goal **4 :** CURRICULUM **5 :** PROSPECTUS, SYLLABUS **6 a :** a plan for the programming of a mechanism (as a computer) **b :** a sequence of coded instructions that can

be inserted into a mechanism (as a computer) or that is part of an organism
7 : matter for programmed instruction”

The verb form of “programming” is defined with the verb form of “program” and
is:

**“program also programme vt -grammed or -gramed; -gramming or -
graming 1 a : to arrange or furnish a program of or for : BILL b : to
enter in a program 2 : to work out a sequence of operations to be
performed by (a mechanism) : provide with a program 3 : to insert a
program for (a particular action) into or as if into a mechanism”**

Applicants assert that these definitions are entirely consistent with Applicants’
present and parent application. For example, the ‘81 disclosure describes a well known
television program, “Wall Street Week”, at U.S. Patent No. 4,694,490 (hereinafter ‘490)
col. 19 l. 5 through col. 20 l. 7. At ‘490 col. 19 l. 48-53 and col. 19 l. 63 through col. 20
l. 7, Applicants disclose a sequence of operations performed by a mechanism (a
computer) which includes a first output (‘490 col. 19 l. 65 through col. 20 l. 2) and a
second output (‘490 col. 20 l. 6). This sequence of operations is performed in response to
“several instruction signals” (‘490 col. 19 l. 46) followed by “an instruction signal” (‘490
col. 19 l. 60). (That Applicants’ “signals” are coded is disclosed at ‘490 col. 11 lines 12-
14 where a code reader passes the signals to a computer.) Applicants assert that these
disclosed instruction signals (‘490 col. 19 l. 48-53 and 60-67) clearly meet the dictionary
definition of a program--“a sequence of coded instructions that can be inserted into a
mechanism (as a computer)”--and are, in fact, what is now, and was in 1981, widely
known among those of considerably less than ordinary skill in the art as “a computer
program” and as “computer programming”.

Applicants also assert that the first output (‘490 col. 19 l. 65 through col. 20 l. 2)
and a second output (‘490 col. 20 l. 6), *by themselves*, also meet the dictionary definition
of a program--“the performance of a program”. Furthermore, Applicants contend that
they constitute both computer programming *and television programming*. Being
generated and outputted by a computer qualifies them as computer programming. Being

displayed as an integral part of a television program--"Wall Street Week" ('490 col. 19 l. 45, 54-60, and col. 19 l. 67 through col. 20 l. 2)--qualifies them as television programming.

Finally, Applicants assert that this disclosure is in no way inconsistent with the meaning given to "programing" in the Abstract of Applicants' parent disclosure--"everything transmitted over television or radio intended for communication of entertainment or to instruct or inform." Applicants clearly disclose that the signals are "instruction signals embedded in the 'Wall Street Week' programing transmission" ('490 col. 19 l. 43-44) and that "These signals instruct" ('490 col. 19 l. 48) and "This signal instructs" ('490 col. 19 l. 64-65).

For the reasons set forth above, Applicants assert that the term "programming" as used throughout the instant application to include what are commonly known as television, radio and computer programming is clearly and unambiguously supported by the specification as filed and withdrawal of the corresponding rejection is respectfully requested.

G. Response to Rejections under 35 U.S.C. § 102

1. Rejection under 102 (b) over Applicants' U.S. Pat. Nos. '490 & '725

Claims 2-14 & 16-302 stand rejected under 35 U.S.C. § 102(b). The Examiner asserts that claims are clearly anticipated by Applicants' own U.S. Patent Nos. 4,694,490 and 4,704,725. (Office Action at 130.) The instant application claims the benefit under 35 U.S.C. § 120 of the filing date of both the previous applications that matured into the patents relied upon by the Examiner. Accordingly, neither of the patents relied upon by the Examiner is available as a reference under 35 U.S.C. § 102(b). The Examiner asserts that the instant specification fails to adequately support the instant claims. This assertion is incorrect and irrelevant to Applicants' claim of priority under 35 U.S.C. § 120.

Under 35 U.S.C. § 120, an application obtains the benefit of the filing date of a previously filed patent application if (a) the invention is disclosed in the manner provided by the first paragraph of section 112 in the previously filed application, (b) the application is filed by inventors named in the previously filed application, (c) the application is filed before the patenting or abandonment of or termination of proceedings on an application similarly entitled to the benefit of the filing date of the first application, and (d) the application contains a specific reference to the earlier filed application. The instant application meets each of these requirements with respect to Applicants' previous Application No. 317,510 filed November 3, 1981. The Examiner acknowledges that Application No. 317,510, discloses the subject matter of the instant claims. The same inventors as filed the instant application filed application No. 317,510. The instant application was filed before the termination of proceedings of Application No. 113,329, filed August 30, 1993, (currently pending) which is similarly entitled to the benefit of the filing date of Application No. 317,510. The instant application contains a specific reference to the entire chain of Applicants' applications extending back to Application No. 317,510. As the instant application meets all the requirements of 35 U.S.C. § 120, the instant application is entitled the benefit of the effective filing date of November 3, 1981. Accordingly, neither U.S. Patent No. 4,694,490 nor No. 4,704,725 are available as prior art under 35 U.S.C. § 102(b) as neither was patented or published more than one year prior to November 3, 1981.

Furthermore, the Examiner asserts, "this rejection, under 35 U.S.C. § 102(b), is caused by Applicants choice to cite passages that did not exist in the original '87 C.I.P. disclosure." Applicants respectfully assert that the showing that the instant claims are supported by the '81 disclosure cannot form the basis for this rejection under 35 U.S.C. § 102(b). To the contrary, the showing establishes that the instant claims are entitled to an effective filing date of November 3, 1981. Additionally, Applicants assert that the

instant claims are fully supported by the instant specification as discussed above in Part F.1.a) above.

For at least the above reasons, Applicants respectfully submit that U.S. Patents Nos. 4,694,490 and 4,704,725 are not available as prior art with respect to the presently pending claims. Applicants, therefore, request the withdrawal of the rejection of claims 2-14 & 16-302 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patents 4,694,490 and 4,704,725.

H. Response to Rejections under 35 U.S.C. § 103

1. *Prima Facie* Case of Obviousness

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference to combine the teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references combined) must teach or suggest all the claim recitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not based on Applicants' disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). M.P.E.P. 706.02(j).

2. Rejection under 103 (a, b & e) over Applicants WO 89/02682.

Claims 2-14 & 16-302 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants' WO 89/02682.

The Examiner asserts that all the instant claims are unpatentable over WO 89/02682 to the extent that applicants can satisfy the support enablement requirement of Section 112, first paragraph, but not the support requirement. WO 89/02682 is the international publication number of the Applicants' own international application

published March 23, 1989. The specification of this international application substantially corresponds to the specification of the instant application and the specification of the parent application filed September 11, 1987. Claims 2 to 303 are entitled to the effective filing date of November 3, 1981. However, assuming *arguendo* that the claim of priority to the 1981 application is flawed, then the claims are entitled to an effective filing date of September 11, 1987. In either case, this international application published March 23, 1989, is unavailable as prior art. Accordingly, Applicants request the withdrawal of this rejection of claims 2-14 & 16-302 under 35 U.S.C. § 103(a).

3. Rejection over Greenberg, U.S. Pat. No. 4,547,804 in view of Galumbeck et al., U.S. Pat. No. 4,725,886.

Claims 2-14 & 16-302, that are directed to processes of controlling cable head end processes and monitoring of those processes and combined medium presentation, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Greenberg, U.S. Pat. No. 4,547,804 in view of Galumbeck et al., U.S. Pat. No. 4,725,886.

The Office Action states that “considering pending claims of the group 2-14 & 16-302, that cover, *inter alia*, processes of controlling cable head end processes and monitoring of those processes and combined medium presentation are suggested by [Greenberg].”

First, Applicants traverse this rejection on the grounds that Greenberg is an unavailable reference in that it was filed on March 21, 1983, subsequent to Applicants’ priority date of November 3, 1981. Additionally, Galumbeck et al. is an unavailable reference in that it was filed on April 21, 1983, again subsequent to Applicants’ priority date of November 3, 1981.

Secondly, the Office Action fails to analyze any of Applicants’ claim language in the rejection but rather chooses to summarize the specific contents of the instant 300 claims (numbers 2-14 & 16-302) with the statement, “processes of controlling cable head

end processes and monitoring of those processes and combined medium presentation.”
The Examiner has failed to identify which, if any, claims actually fall into the group that stands rejected. Under 37 C.F.R. § 1.104(c), “If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered unpatentable will be rejected.” This rule requires that the Examiner at a minimum identify the claims subject to each ground of rejection.

The Examiner has failed to identify which, if any, claims actually fall into the group that stands rejected. When rejecting any claim, the Examiner is required to state the reason for such rejection. 35 U.S.C. § 132. Section 132 is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection. *Chester v. Miller*, 906 F.2d 1574, 1578, 15 U.S.P.Q.2d 1333, 1337 (Fed. Cir. 1990). Under 37 C.F.R. § 1.104(c), “If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered unpatentable will be rejected. . . . The pertinence of each reference, if not apparent, must be clearly explained and *each rejected claim specified*.” (emphasis added) Section 707.07(i) of the M.P.E.P. sets forth, “In every letter, each pending claim should be mentioned by number, and its treatment or status given.” Accordingly, to state a valid rejection the Examiner must, at a minimum, specify by number the claims subject to each ground of rejection. The failure of the Examiner to identify by number the claims that may stand rejected results in a statement that is so uninformative that it prevents Applicants from recognizing and seeking to counter the grounds for rejection. As the purported rejection fails to identify the claims rejected by number, the purported rejection fails to comply with the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c) and M.P.E.P § 707.07(i).

The Examiner has failed to provide information on which a *prima facie* case of obviousness could be based under 35 U.S.C. § 103(a).

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.

Graham v. John Deere Co., 383 U.S. 1, 148 U.S.P.Q. 459, 467 (1966).

The Examiner has utterly failed to conduct the second inquiry set forth in *Graham v. Deere*. The Office Action includes no inquiry into the differences between the prior art and the claims at issue. "Ascertaining the differences between the prior art and the claims at issue requires interpreting the claim language." M.P.E.P. § 2141.02. The Examiner makes no attempt to interpret the claim language. The Examiner makes no attempt to determine whether *the pending claims* are obvious in view of the cited prior art. Rather, the Examiner merely asserts what he feels the applied references teach. The Office Action includes no showing that applied references teach all of the limitations of any of the pending claims. Thus, the Office Action provides insufficient information on which to base a *prima facie* case of obviousness.

Applicants respectfully submit that, notwithstanding the accuracy of the Examiner's characterization of the applied references or applicability of any of these references against the pending claims, for the above reasons the Office Action fails to state a *prima facie* case of obviousness. Therefore, Applicants respectfully request that this rejection under 35 U.S.C. § 103(a) be withdrawn.

4. Rejection over over Jeffers et al., U.S. Pat. No. 4,739,510.

Claims 2-14 & 16-302, that are directed to, *inter alia*, processes of controlling broadcast subscriber stations, including decrypting, processing, storing, generation and monitoring to those processes and combined medium presentation, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Jeffers et al., U.S. Pat. No. 4,739,510.

The Office Action states that "considering pending claims of the group 2-14 & 16-302, that cover, *inter alia*, processes of controlling broadcast subscriber stations,

including decrypting, processing, storing, generation and monitoring to those processes and combined medium presentation they cover what [Jeffers et al.] suggests...broadcast programming including, *inter alia*, audio and control signals that are digitized and inserted into the horizontal blanking interval of distributed television programming.”

First, Applicants traverse this rejection on the grounds that Jeffers et al. is an unavailable reference in that it was filed on April 2, 1987, subsequent to Applicants’ priority date of November 3, 1981. Therefore, Applicants respectfully request that this rejection under 35 U.S.C. § 103(a) be withdrawn.

Secondly, the Office Action fails to analyze any of Applicants’ claim language in the rejection but rather chooses to summarize the specific contents of the instant 300 claims (numbers 2-14 & 16-302) with the statement, “processes of controlling broadcast subscriber stations, including decrypting, processing, storing, generation and monitoring to those processes and combined medium presentation ...broadcast programming including, *inter alia*, audio and control signals that are digitized and inserted into the horizontal blanking interval of distributed television programming.” The Examiner has failed to identify which, if any, claims actually fall into the group that stands rejected. Under 37 C.F.R. § 1.104(c), “If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered unpatentable will be rejected.” This rule requires that the Examiner at a minimum identify the claims subject to each ground of rejection.

The Examiner has failed to identify which, if any, claims actually fall into the group that stands rejected. When rejecting any claim, the Examiner is required to state the reason for such rejection. 35 U.S.C. § 132. Section 132 is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection. *Chester v. Miller*, 906 F.2d 1574, 1578, 15 U.S.P.Q.2d 1333, 1337 (Fed. Cir. 1990). Under 37 C.F.R. § 1.104(c), “If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered

unpatentable will be rejected. . . . The pertinence of each reference, if not apparent, must be clearly explained and *each rejected claim specified.*" (emphasis added) Section 707.07(i) of the M.P.E.P. sets forth, "In every letter, each pending claim should be mentioned by number, and its treatment or status given." Accordingly, to state a valid rejection the Examiner must, at a minimum, specify by number the claims subject to each ground of rejection. The failure of the Examiner to identify by number the claims that may stand rejected results in a statement that is so uninformative that it prevents Applicants from recognizing and seeking to counter the grounds for rejection. As the purported rejection fails to identify the claims rejected by number, the purported rejection fails to comply with the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c) and M.P.E.P. § 707.07(i).

The Examiner has failed to provide information on which a *prima facie* case of obviousness could be based under 35 U.S.C. § 103(a).

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.

Graham v. John Deere Co., 383 U.S. 1, 148 U.S.P.Q. 459, 467 (1966).

The Examiner has utterly failed to conduct the second inquiry set forth in *Graham v. Deere*. The Office Action includes no inquiry into the differences between the prior art and the claims at issue. "Ascertaining the differences between the prior art and the claims at issue requires interpreting the claim language." M.P.E.P. § 2141.02. The Examiner makes no attempt to interpret the claim language. The Examiner makes no attempt to determine whether *the pending claims* are obvious in view of the cited prior art. Rather, the Examiner merely asserts what he feels the applied references teach. The Office Action includes no showing that applied references teach all of the limitations of any of

the pending claims. Thus, the Office Action provides insufficient information on which to base a *prima facie* case of obviousness.

Applicants respectfully submit that, notwithstanding the accuracy of the Examiner's characterization of the applied references or applicability of any of these references against the pending claims, for the above reasons the Office Action fails to state a *prima facie* case of obviousness. Therefore, Applicants respectfully request that this rejection under 35 U.S.C. § 103(a) be withdrawn.

5. Rejection over Hazelwood et al., U.S. Pat. No. 4,025,851 in view of the publication "System and Apparatus for Automatic Monitoring Control of Broadcast Circuits" by Yaname et al. and Hetrich, Australian Patent No. 74,619.

Claims 2-14 & 16-302, that are directed to, *inter alia*, processes of controlling cable head end processes and monitoring of those processes and combined medium presentation are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hazelwood et al., U.S. Pat. No. 4,025,851 in view of the publication "System and Apparatus for Automatic Monitoring Control of Broadcast Circuits" by Yaname et al. and Hetrich, Australian Patent No. 74,619.

a) Characterization of References

(1) Hazelwood et al.

Hazelwood et al. states,

In accordance with a preferred embodiment of the invention, each network originated program is coded with a data signal from which each program may be identified. This coded data signal may take the form of a code identifying the program itself, or the code may identify the source of the program and the time that the program originated to permit the program to be identified from the station logs. The encoding is done by placing binary data on line 20 or any other unused line in the vertical interval. The coded signal is applied to the network where it is received by the network affiliated stations for immediate or delayed broadcast.

A plurality of monitoring sites are disposed about the network coverage area to monitor the programs broadcast by the network affiliates. The monitoring may be

done remotely by means of a monitor receiver that receives the programs broadcast by the network affiliates and recovers the data encoded on line 20. Alternatively, the monitoring unit may be installed on the premises of the network affiliate to monitor the program material applied to the transmitter. In the latter case, there is no need to transmit the data encoded on line 20, and the data may be stripped off by the monitoring unit before the signal is applied to the transmitter.

In either case, the data recovered from line 20 is stored at the remote location in a change format, that is, a format wherein the data is stored once, and new data is stored only when there is a change in the data. In addition, data indicative of the time interval between changes in data is stored. The time information permits delayed broadcasts to be identified since the real-time data will not correspond to the network time data in a delayed broadcast.

Each remote unit is periodically interrogated (usually once per day) via telephone line by a centrally located computer that controls a mini-computer located in each of the remotely located monitor units. Upon interrogation, the mini-computer causes the stored data to be transmitted in blocks to the central computer together with error checking data to permit the central computer to request the remotely located mini-computer to retransmit the data in the event that an error is found. In addition, each remotely located mini-computer may be reprogrammed by the central computer in the event that a modification of the data handling is desired. This is accomplished by providing each remotely located mini-computer with a hard-wired read-only memory (ROM) that initiates the data processing and transmission and a random-access memory (RAM) which may be reprogrammed by the central computer upon completion of the read-only memory routine. (Column 2, lines 8-59.)

In response to the Office Action's characterization of Hazelwood et al., on page 135, the Office Action states that "the embedded codes ... identify the programming being broadcast by *title*,..." (emphasis added). Hazelwood et al. fails to teach identification by "title," but rather, "identified by the source identification code ... and the time of origin ... serving to identify the program. Alternatively, a unique program identifying code can be generated for identifying each program, and used instead of or in addition to the time and source identification code;..." (column 5 lines 61-66).

The Office Action on page 136 characterizes Hazelwood et al. as teaching "the embedded monitoring *instruction* codes..." and, "means for performing communication *programming* to a storage device," (emphasis added). Hazelwood et al. fails to teach

“instruction codes,” and “performing communication *programming* to a storage device,” but rather “a data signal from which each program may be identified,” (column 2 line 11), is “transmitted in blocks to a central computer...,” (column 2 lines 46-47).

Additionally, the Office Action on page 137 states, “At the encoder 12 of Fig. 1, has to have (sic) been controlled so as to communicate the monitoring codes to the summing circuit 14 at “selected” times in view that the monitoring codes were carried through the line at the selected time in which they were provided to summing circuit 14.” Applicants’ best understanding of the Office Action’s characterization may apply to Applicants’ instant claim language:

Claim 19, “predetermined time,”

Claims 26, 28, 58-60, 88, 90, 190, 193-196, 200, 213, 217-219, 222, 234 & 263, “specific time,”

Claims 28, 60, 196, 219, “scheduled time,”

Claims 28, 60, 85, 184, 196, 203, 210, 219 & 245 “different times,”

Claims 41, 88 & 104 “a time and a channel of transmission,” and

Claims 55 & 56, “specific transmission time.”

However, Hazelwood et al. mere teaches that “the video information from the camera 10 is combined with the coding information from the encoder 12 at a mixing point 14 before the signal applied to a network feed line 16 which feeds all of the local network affiliates such as the network outlet 18 shown in Fig. 1,” (column 3 lines 23-28). There is no teaching in Hazelwood et al. of “selected times” of embedding identification codes other than when programming is being feed from camera 10 to mixing point 14.

(2) Yaname et al.

Yaname et al. teaches at page 15 “transmitting by multiplexing a control signal together with the identification signal on the program signal,” wherein the control signal is characterized by a “ Q_E signal transmitted from Station Line ... [when Q_E is] received by

Station M, Station M switches its circuit toward Station Line, and each lower station thereafter switches its circuit toward the next transmitting station in turn.” This switching function as initiated by the control signal (Q_E) at the transmitter stations initiates communication to confirm “that the trouble did not occur between itself and the next higher station, troubleshooting can effect rational recovery action without damaging stations unnecessarily.”

(3) Hetrich

Hetrich teaches control signals “are preferably sent over the network lines during non-programming periods such as the normal one minute station breaks between programs,” (page 11). “These control signals may be used to start and stop audio recorders to record special programs for later broadcast, to accomplish the switching of local and network programs, to interrupt programming for emergency announcements, etc.,” (page 10).

In response to the Office Action’s characterization of Hetrich, the Office Action on page 138 states that, “Hetrich discloses ... embedding control signals used for *identifying* the portions of the network programming which are to be recorded by the storage device of the affiliate stations for delayed re-broadcast,” (emphasis added). However, Hetrich fails to teach or suggest the control signals “*identifying* the portions of the network programming.” All Hetrich teaches the control signals are operative to do is to “start and stop audio recorders to record special programs for later broadcast, to accomplish the switching of local and network programs, to interrupt programming for emergency announcements,” (at page 10).

Additionally, the Office Action’s characterization of Hetrich on page 139 states that, “the control codes are effective to instruct the affiliate station to delay the network programming for some selected period of time.” Applicants traverse this interpretation of Hetrich’s disclosure since all that the control signals are disclosed to accomplish is to

“start and stop audio recorders to record special programs for later broadcast, to accomplish the switching of local and network programs, to interrupt programming for emergency announcements,” (at page 10). There is no teaching or suggestion that the control signals “instruct” the network station to delay the network programming, but merely to start and stop a recording device at the network station. The disclosure anticipates the subsequent broadcasting of the special recorded programs, but fails to indicate that the record start/stop control signal additionally “instructs” the subsequent rebroadcasting.

b) Absence of Comparison of Cited References with Applicants’ Claim Language

The Office Action states that “considering pending claims of the group 2-14 & 16-302, that cover, *inter alia*, processes of controlling cable head end processes and monitoring of those processes and combined medium presentation [Hazelwood] suggests the term ‘processor’ wherein the network station, the affiliate station, and the individual circuits which make up the network and affiliate stations, all function to process signals and hence are considered processors of a kind.”

The Office Action fails to analyze any of Applicants’ claim language in the rejection but rather chooses to summarize the specific contents of the instant 300 claims (numbers 2-14 & 16-302) with the statement, “processes of controlling cable head end processes and monitoring of those processes and combined medium presentation...wherein the network station, the affiliate station, and the individual circuits which make up the network and affiliate stations, all function to process signals and hence are considered processors of a kind.” The Examiner has failed to identify which, if any, claims actually fall into the group that stands rejected. Under 37 C.F.R. § 1.104(c), “If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered unpatentable will be rejected.” This rule requires that the Examiner at a minimum identify the claims subject to each ground of rejection.

When rejecting any claim, the Examiner is required to state the reason for such rejection. 35 U.S.C. § 132. Section 132 is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection. *Chester v. Miller*, 906 F.2d 1574, 1578, 15 U.S.P.Q.2d 1333, 1337 (Fed. Cir. 1990). Under 37 C.F.R. § 1.104(c), "If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered unpatentable will be rejected. . . . The pertinence of each reference, if not apparent, must be clearly explained and *each rejected claim specified*." (emphasis added) Section 707.07(i) of the M.P.E.P. sets forth, "In every letter, each pending claim should be mentioned by number, and its treatment or status given." Accordingly, to state a valid rejection the Examiner must, at a minimum, specify by number the claims subject to each ground of rejection. The failure of the Examiner to identify by number the claims that may stand rejected results in a statement that is so uninformative that it prevents Applicants from recognizing and seeking to counter the grounds for rejection. As the purported rejection fails to identify the claims rejected by number, the purported rejection fails to comply with the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c) and M.P.E.P § 707.07(i).

The Examiner has failed to provide information on which a *prima facie* case of obviousness could be based under 35 U.S.C. § 103(a).

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.

Graham v. John Deere Co., 383 U.S. 1, 148 U.S.P.Q. 459, 467 (1966).

The Examiner has utterly failed to conduct the second inquiry set forth in *Graham v. Deere*. The Office Action includes no inquiry into the differences between the prior art and the claims at issue. "Ascertaining the differences between the prior art and the claims at issue requires interpreting the claim language." M.P.E.P. § 2141.02. The Examiner

makes no attempt to interpret the claim language. The Examiner makes no attempt to determine whether *the pending claims* are obvious in view of the cited prior art. Rather, the Examiner merely asserts what he feels the applied references teach. The Office Action includes no showing that applied references teach all of the limitations of any of the pending claims. Thus, the Office Action provides insufficient information on which to base a *prima facie* case of obviousness.

Applicants respectfully submit that, notwithstanding the accuracy of the Examiner's characterization of the applied references or applicability of any of these references against the pending claims, for the above reasons the Office Action fails to state a *prima facie* case of obviousness. Therefore, Applicants respectfully request that this rejection under 35 U.S.C. § 103(a) be withdrawn.

c) Office Actions Improper Motivation for Combining References

The Office Action on page 137 states, "pending claims of the 2-14 & 16-302, directed to, *inter alia*, processes of controlling cable head end processes and combined medium presentation, not suggested by [Hazelwood et al.], are further suggested [by] Yaname et al. and [Hetrich]." However, the Examiner never states what elements of Applicants' claims were not suggested by the base reference Hazelwood et al. Applicants traverse this rejection as being improper and request withdrawal of the rejection.

(1) Improper Combination of Hazelwood et al. in view of Yaname et al.

Applicants contend that the Office Action improperly combined the switching control codes of Yaname et al. with Hazelwood et al. The disclosure of Hazelwood et al. is directed toward the storing of embedded program identifiers at either network affiliate stations or at viewer receiver stations. Hazelwood fails to teach or suggest any anticipation of transmitted control codes that alter transmitter stations' circuits to switch output toward upline transmitter stations as taught by Yaname et al. The only disclosure

in Hazelwood et al. regarding altering the functionality of a station is the reprogramming of the data collecting monitoring devices by a central data collection station via telephone lines. The Examiner cannot assume it is obvious to modify Hazelwood et al. in view of the control codes of Yaname et al. simply due to the fact that both disclosures have "identification codes" in common, when the base reference Hazelwood et al. fails to anticipate any need for the alleged modifying multiplexed control signal of Yaname et al. that changes the functionality of switching output at a transmitter station. Applicants traverse the rejection combining Hazelwood et al. and Yaname et al. for failing to provide proper motivation for combining the references since there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference to combine the teachings. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). M.P.E.P. 706.02(j).

(2) Improper Combination of Hazelwood et al. and Yaname et al., further in view of Hetrich.

Assuming *arguendo*, that it would have been obvious to modify Hazelwood et al. in view of Yaname et al., Applicants traverse the combination of Hetrich with the two mentioned references. Applicants contend that there was no motivation provided and that it would be improper to combine the recording start and stop control signals transmitted at station breaks of Hetrich with the transmitting station circuit switch control signals of Yaname et al. The Examiner cannot assume it would have been obvious to modify Hazelwood et al. and Yaname et al. further in view of Hetrich due to the fact that both disclosures have "control signals" in common. Yaname et al. discloses transmitting control codes for the purpose of switching output circuits at transmitter stations for the purpose of confirming that the transmission trouble (errors) did not occur between itself and the next higher transmitter station. There is no teaching or suggestion in Yaname et al. that the disclosed Q_E signal could be modified to anticipate and other function including the starting and stopping of recorders during non-program periods as disclosed

by Hetrich. Applicants traverse the rejection combining Hetrich with Hazelwood et al. and Yaname et al. for failing to provide proper motivation for combining the references since there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference to combine the teachings. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). M.P.E.P. 706.02(j).

6. **Rejection over either one of the common subject matter suggested by Campbell et al., (WO 81/02961, abandoned parent application no. 135,987, and U.S. Pat. No. 4,536,791), in view of at least one or more of: Breeze "Television Line 21 Encoded Information and It's Impact on Receiver Station Design"; Schnee, U.S. Pat. No. 4,290,142; and Zaboklicki, DE 2,904,891.**

Claims 2-14 & 16-302, that are directed to, *inter alia*, processes of controlling subscriber station processes and monitoring of those processes and of combined medium presentation and processes, are rejected under 35 U.S.C. § 103(a) as being unpatentable over either one of the common subject matter suggested by Campbell et al., (WO 81/02961, abandoned parent application no. 135,987, and U.S. Pat. No. 4,536,791), in view of at least one or more of: Breeze "Television Line 21 Encoded Information and It's Impact on Receiver Station Design"; Schnee, U.S. Pat. No. 4,290,142; and Zaboklicki, DE 2,904,891.

a) Office Action's Failure to Identify Applicants Claim in the Rejection

The Examiner has failed to identify which, if any, claims actually fall into the group that stands rejected. Under 37 C.F.R. § 1.104(c), "If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered unpatentable will be rejected." This rule requires that the Examiner at a minimum identify the claims subject to each ground of rejection.

Applicants summarize the rejection:

1) The Office Action states, "Campbell et al. suggest (sic) the claims that cover an addressable cable television control system controlling television program and data signal transmission from the cable head end to the subscriber stations," (at page 140).

2) The Office Action then characterizes the Campbell et al. reference with no specific mention to any claims at issue in the instant application.

3) The Office Action then states, "Claims that cover processes of controlling subscriber station processes and monitoring of those processes and of combined medium presentation and processes that are not suggested by Campbell et al. are suggested by Breeze," (at page 142).

4) The Office Action then characterizes the Breeze reference with no specific mention to any claims at issue in the instant application.

5) The Office Action then states, "Claims that cover processes of controlling subscriber station processes and monitoring of those processes and of combined medium presentation and processes that are not suggested by Campbell et al. and are not suggested by Breeze, are suggested by [Schnee]," (at page 143).

6) The Office Action then characterizes the Schnee reference with no specific mention to any claims at issue in the instant application.

7) The Office Action then states, "Claims that cover processes of controlling subscriber station processes and monitoring of those processes and of combined medium presentation and processes that are not suggested by Campbell et al. and are not suggested by Breeze, are not suggested by [Schnee], are suggested by [Zaboklicki]," (at page 143-144).

8) The Office Action then characterizes the Zaboklicki reference with no specific mention to any claims at issue in the instant application.

9) The Office Action states that "it would have been obvious ... for providing cable subscribers with enhanced interactive processes including enhanced

conventional entertainment, providing useful information, and offering greater control to the cable head end operators.” Applicants note that in the entire rejection, not one word of Applicants’ instant claim language was addressed. It seems that the Examiner uses broad characterizations of general concepts found in the instant application and elsewhere in Applicants’ co-pending applications to make this rejection.

Applicants traverse this grounds of this rejection as being improper for failing to identify Applicants’ specific claim language that allegedly reads on the prior art.

When rejecting any claim, the Examiner is required to state the reason for such rejection. 35 U.S.C. § 132. Section 132 is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection. *Chester v. Miller*, 906 F.2d 1574, 1578, 15 U.S.P.Q.2d 1333, 1337 (Fed. Cir. 1990). Under 37 C.F.R. § 1.104(c), “If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered unpatentable will be rejected. . . . The pertinence of each reference, if not apparent, must be clearly explained and *each rejected claim specified*.” (emphasis added) Section 707.07(i) of the M.P.E.P. sets forth, “In every letter, each pending claim should be mentioned by number, and its treatment or status given.” Accordingly, to state a valid rejection the Examiner must, at a minimum, specify by number the claims subject to each ground of rejection. The failure of the Examiner to identify by number the claims that may stand rejected results in a statement that is so uninformative that it prevents Applicants from recognizing and seeking to counter the grounds for rejection. As the purported rejection fails to identify the claims rejected by number, the purported rejection fails to comply with the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c) and M.P.E.P § 707.07(i).

The Examiner has failed to provide information on which a *prima facie* case of obviousness could be based under 35 U.S.C. § 103(a).

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be

ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.

Graham v. John Deere Co., 383 U.S. 1, 148 U.S.P.Q. 459, 467 (1966).

The Examiner has utterly failed to conduct the second inquiry set forth in *Graham v. Deere*. The Office Action includes no inquiry into the differences between the prior art and the claims at issue. "Ascertaining the differences between the prior art and the claims at issue requires interpreting the claim language." M.P.E.P. § 2141.02. The Examiner makes no attempt to interpret the claim language. The Examiner makes no attempt to determine whether *the pending claims* are obvious in view of the cited prior art. Rather, the Examiner merely asserts what he feels the applied references teach. The Office Action includes no showing that applied references teach all of the limitations of any of the pending claims. Thus, the Office Action provides insufficient information on which to base a *prima facie* case of obviousness.

Applicants respectfully submit that, notwithstanding the accuracy of the Examiner's characterization of the applied references or applicability of any of these references against the pending claims, for the above reasons the Office Action fails to state a *prima facie* case of obviousness. Therefore, Applicants respectfully request that this rejection under 35 U.S.C. § 103(a) be withdrawn.

b) Rejection further in view of Zaboklicki.

Zaboklicki discusses in general terms (as best understood by Applicants) an "interactive television system" (i) wherein "a local central unit is provided in the home television receivers on the receiver side; that central unit switches the data selection systems on the basis of the television viewer's answer and on the basis of the centrally transmitted digital processing program for the television segments (transmission fragments)" (English language translation of DE 29 04 981 A 1 at 10 ll. 13 - 18); (ii) with "individual variants of ... additional information ... passed on in the form of

acoustic or sound signals in the television receiver in the infrared band to the individual infrared receivers” (*id.* at 11 ll. 2 - 7); (iii) with “participation of the television viewer in the centrally transmitted telecast in such a way that the output signals of the local central unit in the viewfinder of the television camera turn on the contours of the person is provided for by the director [whereby the shape of the viewer contained in these contours is blended into the main content” (*id.* at page 12, lines 8 - 13); and (iv) wherein, “[i]n the case of telecasts where an answer or the opinion of the television viewers is desired... the viewer’s answer is put out parallel and converted into telephone signals... introduced into the subscriber telephone line... [and] supplied to the monitor in the television studio after statistical processing” (*id.* at 12, l. 13 through p. 13 l. 3).

In fact, Zaboklicki is so vague and indefinite in its description of the technology that virtually any reliance on the publication as prior art in the instant application can only be based on speculation and conjecture about the functionalities alleged to be provided by, or the method of operation of, the Zaboklicki system. Zaboklicki is not an enabling publication.

Applicants note the PTO has supplied and relies on a translation of German Patent publication No. DE 2904981 A 1 in formulating the rejections of the subject claims. Applicants have found that the applied German Patent publication is based on an earlier Polish patent application No. PL 204525 A filed February 9, 1978. In addition to the German publication, the earlier Polish application also forms the basis for French patent publication FR 2417226 A published October 12, 1979 and British patent publication GB 2016874 A published September 26, 1979.

After careful review of the Polish application and British publication, it is self evident that neither the translation provided by the PTO nor the British patent publication (presumably prepared or approved by Zaboklicki) indicates or suggests any method of operation of, or relationship between, the blocks shown in the various figures. In fact, it is difficult or impossible to determine what functions are being performed by the blocks

shown in the various figures because many of the labels are not descriptive, failing to articulate or indicate the intended function. The written description does not cure this defect of the disclosure, failing to describe the functions or the interactions between the blocks. Examples of labels inadequately describing the structure of and function performed by the corresponding blocks are included in the following table.

Ref. No	Label	Description	
		English Language Translation of German Patent Publication	British Patent Publication
4	The circuit for the prescreening of information items for television viewers	preliminary screening of the information items for the television viewer	distributes the information for viewers
5	The control circuit	None	output of control system 5 is additionally fed to the circuits 8 and 10 and is also applied to a circuit 11 for restoring the music signal
6	The central unit (the processor, for example, integrated microprocessor)	the output signals of the central unit 6 control a data selection circuit 8; energizes a sound signal switching unit 20 in at least one additional sound channel	output of circuit 3 is fed to a processor 6 ... [which] is also fed with signals representing the viewer's answer from the circuit 2 [and] transmits a digital programme of manipulation, viewers' answers and the successive identification data of ... individual fragments of the broadcast to a store or memory (RAM) 7; keyboard 12 feed into the processor 6 and the latter output to a transmitter of infra-red signals 13 which produces a remote control signal at 14; Digital data and audio signals with different variants of additional information are applied at 15 to the input of a receiver 16 of infra-red signals having an output in the form of digital data fed over line 17 to processor 6; switching-on of the selected audio channel as determined by the processor 6
10	The circuit for video signal conversion and image illumination	used to convert video signals and for image illumination	for converting video signals and displaying a picture
11	The circuit for sound signal restitution	circuit for sound signal restitution	for restoring
15	The digital data and the phonics with the different variants of additional information	None	input of receiver 16

Ref. No	Label	Description	
		English Language Translation of German Patent Publication	British Patent Publication
19	The command for sound turn-on in the corresponding channel	command for a sound signal of a corresponding channel that is supplied to a circuit 20 for turning on the selected sound channel	commands to switch-on the audio signal from a specific channel are fed over the command line 19 from the processor 6 to the receiver 20
27	The switchover of the television channels for the prescreening of the corresponding fragments of a telecast	line for switching over television channels for preliminary screening of the corresponding fragments of a telecast	television receiver 54 is fed over line 53 with control signals from the remote control signal receiver 52 and over the one 27 from the output system 49 of the processor
28	The short term of call signal transmission during which the answer is delayed	control signal for the delay of the answer, which represent the short span of time during which call signal transmission takes place and during that time span, the answer is delayed.	[Control system 32] is also fed via 28 with a short delay signal for sending the dialing signals when the answer is postponed
29	The prefix generator for transmission announcement of the television viewer's answer	for a transmission announcement of the television viewer's answer with a subscriber generator 30 and with a circuit 31 to generate the television viewer's answer	prefix generator for announcing the transmission of the televiewer's answer
35	The circuit for the introduction of the initial data of the television viewers	serves to put in initial data from the television viewers	circuit for introducing the televiewer's answers
36	The circuit for the prescreening of the digital data from the video signal	causes the preliminary screening of the digital data of the video signal	system for distributing the digital data from the video signals
38	The multiplexer circuit	supplies a signal for the subscriber telephone line 33.	Output from the units 29 and 30, 31 and 32 are applied to a multiplexer 38 whose output 46 is in turn fed to a subscriber telephone line
40	The circuit for the prescreening of the digital handling program (telesoftware) and the identification data of the individual fragments of the telecast	for the prescreening of digital processing programs and the identification data of the individual transmission fragments with the input circuits 39	system for separation of the telesoftware and the identification data of the individual fragments of the broadcast
41	The data selection circuit of the circuit for the comparison of the addresses of the teletext information items	constitutes a data selection circuit or a circuit for the comparison of the addresses of text information, for example, page numbers. Local central unit 6 switches over the data selection circuits 41 as a result of the answers from a television viewer and the digital processing programs which are supplied to the central unit 39 by the output circuit	information selections system or a system for comparing the address of the teletext information, for example the page number, in conjunction with the local processor 6 for switching over the information selection system depending upon the televiewers answer and on the telesoftware

Ref. No	Label	Description	
		English Language Translation of German Patent Publication	British Patent Publication
42	generator of the alphanumeric and graphic symbols	generator for alphanumeric and graphic symbols	alphanumeric and graphic character generator
43	circuit for turning on one of the additional sound channels in the television receiver (54)	switch-on or for the operation of additional sound channels of a television receiver 54	audio channel switch for switching on the sound signal in the television receiver
45	multiplexer circuit	multiplexer circuit	multiplexer of the receiver
46	signal output for the subscriber telephone line	None	none
47	circuit for the prescreening of the symbols for the control of the image illumination function	prefiltering or prescreening of the symbols for the control of image illumination	system for distributing characters to the display control
48	output circuit for symbols	output circuit	character output system
51	multiplexer circuit in the viewfinder of the television camera for the application of the graphic symbols on the image	multiplexer circuit 51 in the viewfinder of a television camera is used to project the graphic symbols into the image of receiver 54 of the television camera that furthermore is connected to a receiver 52 for a remote-control signal	multiplexer system
54	television receiver with at least one additional sound channel	Receiver	television receiver including an audio channel switch 43 for switching on the sound signal I the television receive and an output circuit 55 for the video signal

Ref. No	Label	Description	
		English Language Translation of German Patent Publication	British Patent Publication
56	teletext decoder with the additional data output after hamming decoder	a video text decoder 56 with an additional data output (hamming decoder)	teletex decoder having an additional data output behind the Hamming decoder comprising a control system 26, a system 36 for distributing the digital data from the video signals, a system 40 for separation of the telesoftware and the identification data of the individual fragments of the broadcast, an information selection system 41, (or a system for comparing the address of the teletex information, for example the page number, in conjunction with the local processor 6 for switching over the information selection system depending upon the viewers answer and upon the telesoftware), an RAM memory 44, a system 57 for distributing control characters, (for example no display), an alphanumeric and graphic character generator 42, a system 47 for distributing characters to the display control and a character output system 48.
57	circuit for the prescreening of the control symbols, for example, a command: do not illuminate	A circuit 57 in decoder 56 is used for the prefiltering of control signals or control commands (For example, do not illuminate.)	system for distributing control characters, (for example no display)

It is established that prior art must be enabling. *Rockwell Int'l. Corp. v. United States*, 147 F.3d 1358, 1365, 27 U.S.P.Q.2d 1027 (Fed. Cir. 1998). "In order to render a claimed apparatus or method obvious, the prior art must enable one skilled in the art to make and use the apparatus or method." *Beckman Industries, Inc. v. LKB Produkter AB*, 892 F.2d 1547, 1551, 13 U.S.P.Q.2d 1301, 1304 (Fed. Cir. 1989) (citing *In re Payne*, 606 F.2d 303, 314, 203 U.S.P.Q. 245, 255 (CCPA 1979)). Accordingly, in *Beckman*, held as a correct statement of the law were jury instructions that stated, "References relied upon to support a rejection for obviousness must provide an enabling disclosure. That is to say, they must place the claimed invention in the possession of the public." *Id.* at 1550-51, 13 U.S.P.Q.2d at 1303-4. The Federal Circuit has observed that "even if the claimed

invention is disclosed in a printed publication, that disclosure will not suffice as prior art if it was not enabling.” *In re Donohue*, 766 F.2d 531, 533, 226 U.S.P.Q. 619, 621 (Fed. Cir. 1985) (citing *In re Borst*, 345 F.2d 851, 855, 145 U.S.P.Q. 554, 557 (C.C.P.A. 1965), cert. denied, 382 U.S. 973, 148 U.S.P.Q. 771 (1966) (“the disclosure must be such as will give possession of the invention to the person of ordinary skill”)). *See also In re Epstein*, 32 F.3d 1559, 1568, 31 U.S.P.Q.2d 1817, 1823 (Fed. Cir. 1994); *Reading & Bates Construction Co. v. Baker Energy Resources Corp.*, 748 F.2d 645, 651-52, 223 U.S.P.Q. 1168, 1173 (Fed. Cir. 1984); *Preemption Devices, Inc. v. Minnesota Mining & Manufacturing Co.*, 732 F.2d 903, 906, 221 U.S.P.Q. 841, 843 (Fed. Cir. 1984).

If anything is clear, it is that Zaboklicki does not place the technology of Applicants’ invention into the hands of the public. The reference to Zaboklicki at most presents some block diagrams which, as best understood, are directed to the four functions previously outlined. The details of these functionalities or how they are accomplished are not described in sufficient detail or with sufficient clarity to constitute an enabling disclosure.

Therefore, Applicants respectfully request the withdrawal of this rejection of claims 2-14 & 16-302 under 35 U.S.C. § 103(a).

7. **Rejection further in view of one or more of: Hazelwood et al., Yaname et al., Hetrich, Marsden, Young et al., "Journal of SMPTE" Oct. 1971, U.S. Pat. No. 3,761,888 to Flynn, U.S. Pat. No. 3,627,914 to Davis, Tunmann et al., U.K. Pat. No. 959,374 to Germany, Byloff, Chiddix, Skilton, Schiller et al., Zettl, Vikene, U.S. Pat. No. 4,547,804 to Greenberg, Jeffers et al., Diederich, Campbell et al. (WO 81/02961, abandoned U.S. application no. 135,987, and U.S. Pat. No. 4,536,791), Kazama et al., Gosch, Stern, Breeze, Barlow, Millar, U.S. Pat. No. 4,725,886 to Galumbeck et al., "CBS/CCETT North American Broadcast Teletext Specification," Zaboklicki, U.S. Pat. No. 4,064,490 to Nagel, U.S. Pat. No. 4,251,691 to Kakiyara, Hedger et al., Anderson, Gunn, Gaucher, U.S. Pat. No. 4,290,142 to Schnee et al.**

Claims 2-14 & 16-302, that are directed to, *inter alia*, either processes of controlling affiliate stations and processes and monitoring of those processes and combined medium presentation or processes of controlling subscriber stations and method and process for monitoring and providing combined medium presentations, that fall out each particular determining group members of the group of claims described in rejection above, the groups are rejected further in view of one or more of: Hazelwood et al., Yaname et al., Hetrich, Marsden, Young et al., "Journal of SMPTE" Oct. 1971, U.S. Pat. No. 3,761,888 to Flynn, U.S. Pat. No. 3,627,914 to Davis, Tunmann et al., U.K. Pat. No. 959,374 to Germany, Byloff, Chiddix, Skilton, Schiller et al., Zettl, Vikene, U.S. Pat. No. 4,547,804 to Greenberg, Jeffers et al., Diederich, Campbell et al. (WO 81/02961, abandoned U.S. application no. 135,987, and U.S. Pat. No. 4,536,791), Kazama et al., Gosch, Stern, Breeze, Barlow, Millar, U.S. Pat. No. 4,725,886 to Galumbeck et al., "CBS/CCETT North American Broadcast Teletext Specification," Zaboklicki, U.S. Pat. No. 4,064,490 to Nagel, U.S. Pat. No. 4,251,691 to Kakiyara, Hedger et al., Anderson, Gunn, Gaucher, U.S. Pat. No. 4,290,142 to Schnee et al.

a) **The Provisional Rejection over Numerous References is Improper**

Paragraph 19 of the Office Action it is stated: "Pending claims of the group 2-14 & 16-302 that are directed to, *inter alia*, either process of controlling affiliate stations and processes and monitoring of those processes and combined medium presentation or processes of controlling subscriber stations and method and process for monitoring and providing combined medium presentations, or both, that fall out each particular determined group members of the group of claims described in rejection above, the groups are provisionally rejected further in view of one or more of [some thirty-six listed references]." This statement clearly fails to state a proper rejection. This statement fails to provide reasons for a rejection and is clearly so uninformative that it prevents the applicant from recognizing and seeking to counter any potential grounds for rejection. Applicants cannot determine to what claims this statement is applicable. The Examiner has failed to cite to the best references and avoid merely cumulative references. The references cited include at least some that cannot be relied upon as prior art against the pending claims. The Examiner has failed to explain the pertinence of each reference and to specify each rejected claim. The Office Action includes an explanation of the Examiner's understanding of the level of skill in the art in terms of some of the cited references. However, this explanation fails to include the elements of a proper rejection under 35 U.S.C. § 103(a). Furthermore, the statement does not purport to be a rejection, but rather states that groups are *provisionally* rejected. Applicants find no rejection in this statement by the Examiner to which a response from Applicants is required.

The Examiner has no authority to "provisionally" reject claims in view of one or more of a large group of generally cumulative references. The Office Action includes no reference to any authority for this "provisional" rejection. The M.P.E.P. provides for a provisional rejection only in the situation where a pending application upon issuance will become valid prior art, against provisionally rejected claims, under 35 U.S.C. § 102(e),

35 U.S.C. § 101 (statutory double patenting), or the judicially created doctrine of obvious type double patenting. The pending application used in the provisional rejection must have a common assignee or common inventor with the application containing the provisionally rejected claims. *See*, M.P.E.P. §§ 706.02(f), 706.02(k), and 804. The provisional rejection is permitted to alert applicants that they should expect an actual rejection on the merits if and when the applied pending application issues. There is no authority nor is there any good reason to issue a provisional rejection over references that are issued patents or have been published. The Examiner appears to attempt to alert Applicants to potential rejections that will be made once the Examiner has fully reviewed and analyzed the instant application to determine whether the claims define a useful, novel, non-obvious, and enabled invention that has been clearly described in the specification. However, the Examiner should clearly articulate any rejection early in the prosecution process so Applicants have the opportunity to provide evidence of patentability and otherwise respond completely at the earliest opportunity. M.P.E.P. § 706. The Examiner may not reserve rejections for future actions. “The examiner’s action will be complete as to all matters.” 37 C.F.R. § 1.104(b). “If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered unpatentable *will* be rejected.” 37 C.F.R. § 1.104(c)(1)(emphasis added). As this purported “provisional” rejection is asserted under no authority and fails to clearly articulate any rejection, Applicants respectfully submit that this “provisional” rejection has no effect on the instant application.

b) Rejection under 35 U.S.C. § 103 is Improper

Additionally, this statement fails to provide reasons for a rejection and is clearly so uninformative that it prevents the applicant from recognizing and seeking to counter any potential grounds for rejection. Applicants cannot determine to what claims this statement is applicable. The Examiner has failed to cite to the best references and avoid

merely cumulative references. The references cited include at least some that cannot be relied upon as prior art against the pending claims. The Examiner has failed to explain the pertinence of each reference and to specify each rejected claim. The Office Action includes an explanation of the Examiner's understanding of the level of skill in the art in terms of some of the cited references. However, this explanation fails to include the elements of a proper rejection under 35 U.S.C. § 103(a).

The Examiner has failed to identify which, if any, claims actually fall into the group that stands rejected. Under 37 C.F.R. § 1.104(c), "If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered unpatentable will be rejected." This rule requires that the Examiner at a minimum identify the claims subject to each ground of rejection.

When rejecting any claim, the Examiner is required to state the reason for such rejection. 35 U.S.C. § 132. Section 132 is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection. *Chester v. Miller*, 906 F.2d 1574, 1578, 15 U.S.P.Q.2d 1333, 1337 (Fed. Cir. 1990). Under 37 C.F.R. § 1.104(c), "If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered unpatentable will be rejected. . . . The pertinence of each reference, if not apparent, must be clearly explained and *each rejected claim specified*." (emphasis added) Section 707.07(i) of the M.P.E.P. sets forth, "In every letter, each pending claim should be mentioned by number, and its treatment or status given." Accordingly, to state a valid rejection the Examiner must, at a minimum, specify by number the claims subject to each ground of rejection. The failure of the Examiner to identify by number the claims that may stand rejected results in a statement that is so uninformative that it prevents Applicants from recognizing and seeking to counter the grounds for rejection. As the purported rejection fails to identify the claims rejected by number, the purported rejection fails to comply with the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c) and M.P.E.P § 707.07(i).

The Examiner has failed to provide information on which a *prima facie* case of obviousness could be based under 35 U.S.C. § 103(a).

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.

Graham v. John Deere Co., 383 U.S. 1, 148 U.S.P.Q. 459, 467 (1966).

The Examiner has utterly failed to conduct the second inquiry set forth in *Graham v. Deere*. The Office Action includes no inquiry into the differences between the prior art and the claims at issue. "Ascertaining the differences between the prior art and the claims at issue requires interpreting the claim language." M.P.E.P. § 2141.02. The Examiner makes no attempt to interpret the claim language. The Examiner makes no attempt to determine whether *the pending claims* are obvious in view of the cited prior art. Rather, the Examiner merely asserts what he feels the applied references teach. The Office Action includes no showing that applied references teach all of the limitations of any of the pending claims. Thus, the Office Action provides insufficient information on which to base a *prima facie* case of obviousness.

Applicants respectfully submit that, notwithstanding the accuracy of the Examiner's characterization of the applied references or applicability of any of these references against the pending claims, for the above reasons the Office Action fails to state a *prima facie* case of obviousness. Therefore, Applicants respectfully request that this rejection under 35 U.S.C. § 103(a) be withdrawn.

I. Response to Examiner's Administrative Requirement

Applicants respectfully traverse the requirements imposed by the Examiner in the Office Action at page 170.

The Examiner requires Applicants to either:

- (1) file terminal disclaimers in each of the related 329 applications terminally disclaiming each of the other 329 applications; or
- (2) provide an affidavit attesting to the fact that all claims in the 329 applications have been reviewed by applicant and that no conflicting claims exist between the applications; or
- (3) resolve all conflicts between claims in the related 329 applications by identifying how all the claims in the instant application are distinct and separate inventions from all the claims in the above identified 329 applications.

In addition, Examiner states that failure to comply with any one of these requirements will result in abandonment of the application.

Applicants traverse this requirement for the reasons stated in Section II C of the Amendment and Request for Reconsideration filed September 18, 1998 in application number 08/470,571. Further, Applicants have fully responded to the re-imposition of this requirement in the Petition To The Commissioner Under 37 C.F.R. § 1.181 filed March 7, 2000, which requests, *inter alia*, that this improper requirement be withdrawn.

J. Response to Obviousness-Type Double Patenting Rejection

Applicants respectfully request that the Examiner reconsider and withdraw his rejection based on obviousness-type double patenting on two separate grounds.

1. The Examiner has totally confused and misapplied the established law of double patenting and, further, has failed to follow the mandates of the Manual of Patent Examining Procedure as to double patenting rejections.
2. The Examiner has also failed to analyze the pending claims on a limitation-by-limitation basis to demonstrate that no patentable distinctions exist between the pending claims and those in the issued Harvey patents.

1. PTO Assertions in Office Action mailed January 7, 2000

The Examiner has rejected claims 2-14 & 16-302 of the application under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of U.S. Patent No. 4,684,490 (Harvey I); claims 1-5 of U.S. Patent No. 4,704,725 (Harvey II); claims 1-25 of U.S. Patent No. 4,965,825 (Harvey III); claims 1-26 of U.S. Patent No. 5,109,414 (Harvey IV); claims 1-71 of U.S. Patent No. 5,233,654 (Harvey V); and claims 1-56 of U.S. Patent No. 5,335,277 (Harvey VI), in view of at least one or more of a list of over 30 prior art references from pages 171-181.

In the Office Action at page 181, the Examiner rejects 2-14 & 16-302 under obviousness-type double patenting as being unpatentable over any single claim or combination of claims are "no more than an obvious variation of the patented claims when the teachings discussed throughout this action are considered." (Office Action at 181.) The Examiner attempts to assert a catch-all rejection by incorporating all arguments and allegations discussed throughout the pages of the Office Action. Again, the Examiner provides no authority for this sweeping new ground for rejecting claims under obviousness-type double patenting.

The Examiner's application of obviousness-type double patenting standard represents an erroneous and misapplied interpretation of existing case law and is contrary to patent examining procedure. First, the Examiner has confused and misapplied the established law of double patenting and has failed to follow the mandates of the M.P.E.P. as to double patenting rejections. Secondly, the Examiner has also failed to analyze the pending claims on a limitation-by-limitation basis to demonstrate that no patentable distinctions exist between the pending claimed and those issued in the Harvey patents as required by the M.P.E.P.

Based on the following discussion, Applicants respectfully request the withdrawal of these rejections.

2. The Scope of the Double Patenting Doctrine

The prohibition against double patenting is a judicial doctrine based on the language of 35 U.S.C. § 101, which specifies that an inventor who invents “any new and useful process, machine, manufacture, or composition of matter...may obtain a patent therefor.” In *Miller*¹, the U.S. Supreme Court held the term “a patent” to mean, “two valid patents for the same invention cannot be granted either to the same or to a different party.”² Therefore, the claims in a second patent must be patentably distinct from the claims in a first patent or the second patent would be an improper extension of the first.

As the preclusion is to obtaining two patents on the same invention or an obvious modification of the same invention, the sole question is whether by examining the scope of the claims, one has attempted to claim the same subject matter twice, or an obvious variation. No prohibition exists against a second patent on subject matter that is disclosed but not claimed in the first patent.

Under 35 U.S.C. § 120, a patent applicant may submit additional claims in a subsequent application which are supported by the disclosure in the original applications' specification. A proper continuation application and its original application are considered “parts of the same transaction, and both as constituting one continuous application, within the meaning of the law.”³ Furthermore, 35 U.S.C. § 120 does not place a definite time limit on filing a continuing application. Rather, all that is required to preserve an earlier effective filing date as to common subject matter is copendency or a continuous chain of copendency.

The double patenting doctrine prevents an extension of a patent term which would occur if successive patents were allowed on the same invention or obvious variants.

¹ *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894).

² *Id.* at 197.

³ *In re Hogan*, 449 F.2d 595, 603 (CCPA 1977)(quoting *Godfrey v. Earnes*, 68 U.S. 317, 325-6 (1864)).

However, if two patents contain the same disclosure, but claim different inventions or nonobvious variations, double patenting does not exist.

3. Patent Office Procedure

The U.S. Patent and Trademark Office ("PTO") has specified a procedure in the Manual of Patent Examining Procedure (M.P.E.P.) for Examiners to follow in establishing a *prime facie* case of double patenting. In determining whether a proper basis exists for a double patenting rejection, the Examiner must determine whether:

1. A double patenting rejection is prohibited by the third sentence of 35 U.S.C. § 121 related to divisional applications,
2. A statutory basis exists (i.e., whether same-invention double patenting is present), or
3. A non-statutory basis exists (i.e., whether obviousness-type double patenting is present).⁴

Assuming the application is not a divisional application, the Examiner must establish in step 2 that the same invention is being claimed twice. The Court specified in *In re Vogel*, 422 F.2d 438, 164 U.S.P.Q. 619 (C.C.P.A. 1970), that in determining same-invention double patenting analysis, one must ask "is the same invention being claimed twice?...[The] "invention" here means what is defined by the claims, whether new or old, obvious or unobvious....By the "same invention" we mean identical subject matter."⁵ The court stated "that claims may be differently worded and still define the same invention."⁶ In conclusion, the court found "the only objective test" for same-invention double patenting as,

⁴ M.P.E.P. § 804.

⁵ *In re Vogel*, 422 F.2d at 441.

⁶ *Id.*

whether one of the claims could be literally infringed without literally infringing the other. If it could be, the claims do not define identically the same invention.⁷

If there is no same-invention double patenting, then the Examiner must establish in step 3 obviousness-type double patenting wherein the grant of a patent with the claims in the application would unjustly extend the rights granted by the first patent.

4. Nonstatutory Double Patenting

In defining nonstatutory double patenting, the M.P.E.P. provides three types of nonstatutory-type double patenting based on the judicial doctrine, which include one-way obviousness, two-way obviousness⁸, and nonobviousness rejections.⁹

Under the M.P.E.P. requirements, if the application at issue is the later filed application, only a one-way determination of obviousness is needed to resolve the issue of double patenting. The issue to be determined is whether the invention defined in a claim in the application is an obvious variation of the invention defined in a claim of the patent. *See, e.g., In re Berg*, 46 U.S.P.Q.2d 1226 (Fed. Cir. 1998). The M.P.E.P. mandates that unless a claimed invention in the application is obvious over a claimed invention in the patent, an Examiner should make no double patenting rejection of the obviousness-type. Thus, the sole issue is the scope of the inventions as defined by the claim language in the patent and later filed application.

⁷ *Id.*

⁸ A two-way obviousness double patenting rejection arises in the specific instance where the claims of a patent application are being compared with the claims of a later filed but earlier issued patent. This is not the case with respect to the present double patenting rejection.

⁹ M.P.E.P. § 804. Nonobviousness-type double patenting rejections arise in circumstances as described in *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). With respect to the instant application, a nonobviousness-type double patenting rejection was made on February 6, 1997, and withdrawn in the Office Action mailed on March 31, 1998.

a) **Standard for Determining One-Way Obviousness-Type
Double Patenting**

*In re Kaplan*¹⁰, the Federal Circuit specified that an obviousness-type double patenting rejection rests on the prohibition against issuance of a second patent that would continue protection, beyond the expiration date of the first patent, or a mere variation of the previous patented invention that would have been obvious to those of ordinary skill in the relevant art.

Thus, in establishing a *prima facie* case of obviousness-type double patenting, the Examiner must,

1. Identify the inventions claimed in the claims under consideration and in the patent claims,
2. Establish that any variation(s) between the inventions claimed in the claims under consideration and the earlier-issued patent claims would have been obvious to person of ordinary skill in the art, and
3. Establish a *prima facie* case of obviousness.¹¹

To summarize, the Examiner must show that (1) the inventions claimed (2) are not patentably distinct based on (3) a *prima facie* showing of obviousness. Instead, the Examiner has provided bald statements that obvious variations exist. The mere finding that the claims themselves are obvious variations, without establishing that the alleged variations would have been obvious, cannot properly support an obviousness-type double patenting rejection.

In the Office Action under paragraphs 22-23, the Examiner has failed to establish a *prima facie* showing of obviousness-type double patenting in the rejection of 2-14 & 16-302. In particular, the Examiner has not identified the scope of the inventions of the

¹⁰ *In re Kaplan*, 789 F.2d 1574, 229 USPQ 678 (Fed. Cir. 1986).

¹¹ See *In re Longi*, 759 F.2d 887, 225 USPQ 645, 651 (Fed. Cir. 1985) (Examiner must provide *prima facie* case of obviousness for obviousness-type double patenting rejection. The burden then shifts to the Applicant to rebut the *prima facie* case).

instant application and the patents as determined by the claims. Secondly, the Examiner has not positively identified any variations in the claims of the instant application and the claims of the patent. Examiner has provided broad allegations that obvious variants exist, but fail to specifically state these allegedly obvious variants. Thirdly, the Examiner has not shown a *prima facie* case of obviousness under the requirements of 35 U.S.C. § 103. The Examiner has not indicated proper motivation in making the alleged obvious modifications. Since no motivation is provided, it may follow that the variations are not obvious. Moreover, monopolies would not be extended on the same claimed invention.

(1) Identifying the Inventions Claimed

(a) Scope of the Inventions as Defined by the Claim Language

The C.C.P.A. in *In re Vogel*¹² summarized this step by asking, “does any claim in the application define merely an obvious variation of an invention disclosed and claimed in the patent?”¹³ The analysis is based on what the claim defines, and not merely the claim language itself. This first step in the analysis should not focus on what the claim language *discloses*, but on rather what the claim language *defines*.¹⁴ As noted by the Federal Circuit,

it is important to bear in mind that comparison can be made only with what invention is *claimed* in the earlier patent, paying careful attention to the rules of claim interpretation to determine what invention a claim *defines* and not looking to the claim for anything that happens to be mentioned in it *as though it were a prior art reference*.¹⁵

...

¹² *In re Vogel*, 422 F.2d 438, 164 USPQ 619.

¹³ *Id.*, 164 USPQ at 622.

¹⁴ *General Foods Corp. v. Studiengesellschaft Kohle mbh*, 972 F.2d 1272, 23 USPQ 1893, 1845 (Fed. Cir. 1992).

¹⁵ *Id.*, 972 F.2d at 1280.

[T]he fundamental rule of claim construction, that what is claimed is what is *defined by the claim taken as a whole*, every claim limitation...being material¹⁶

...

[P]atent claims are looked to only see what *has been patented*, the subject matter which *has been protected*, not for something one may find to be disclosed by reading them¹⁷

Rather than identifying the scope of the inventions as defined by the claims, the Examiner has assumed an obviousness-type double rejection based on two claims in separate applications supported by the same embodiment of the applications' common specification, as set forth in paragraph 23. The basis for the Examiner's obviousness-type double patenting rejection is premised on a common embodiment. There is no statutory basis for this improper interpretation of obviousness-type double patenting.

The Examiner's "same embodiment" basis for obviousness-type double patenting is erroneous for at least the following reasons. First, two claims in two separate applications may find support in the same embodiment while claiming inventions that are patently distinct. An embodiment as described by a common specification and drawings may fully disclose a wide range of details and limitations. However, it may not follow that separate claims, which are supported by a common embodiment, are also identical in scope, as assumed by the Examiner. Second, by relying on a common embodiment, the Examiner has improperly treated the specification as prior art. Finding a claimed invention to be an obvious variation of patented claims by treating the patent disclosure

¹⁶ *Id.*

¹⁷ *Id.* citing *In re Aldrich*, 398 F.2d 855, 859, 158 USPQ 311, 314 (CCPA 1968).

as though it is prior art has been repeatedly held as impermissible.¹⁸ The use of an applicant's invention disclosure as prior art against him is improper.¹⁹ By broadly rejecting pending claims under obviousness-type double patenting without analyzing the claims of the inventions, the Examiner has misapplied and confused the law of obviousness-type double patenting.

(b) Proper Use of Specification

Because the obviousness-type double patenting rejection requires claim interpretation, the Examiner may use the specification in a limited capacity to assist in interpreting what the claim language defines. The patent disclosure cannot be used as prior art, but the disclosure can be used to (1) determine the meaning of terms in a claim and may also be used as required to (2) answer the above question, "whether the claim in the application defines merely an obvious variation of the invention disclosed and claimed in the patent."²⁰ With respect to "the invention disclosed and claimed in the patent," the Federal Circuit stated in *Vogel*,

We recognize that it is difficult, if not meaningless, to try to say what is or is not an obvious variation of a claim. A claim is a group of words defining only the boundary of the patent monopoly....The disclosure, however, sets forth at least one tangible embodiment within the claim, and it is less difficult and more meaningful to judge whether that thing has been modified in an obvious manner. It must be noted that this use of the disclosure is not in contravention of the cases forbidding its use as prior art, nor is it applying the patent as a reference under 35 U.S.C. § 103, since only the disclosure of the invention claimed in the patent may be examined.²¹

¹⁸ *In re Kaplan*, 229 USPQ at 683.

¹⁹ *Id.*

²⁰ *In re Vogel*, 422 F.2d at 441.

²¹ *Id.*, 422 F.2d at 442.

Therefore, it is proper to identify the invention claimed in the patent by using *exclusively only the portion(s) of the disclosure supporting the claimed invention.*

Alternately, it is improper to make a double patenting rejection when the rejection relies on specification support other than the specific portion(s) of the disclosure supporting the claimed invention.

It has been repeatedly held that use of disclosure of a patent cited in support of a double patenting rejection cannot be used as through it were prior art, even where the disclosure is found in the claims. *See, e.g., Braat*, 937 F.2d at 594 n.5, 19 U.S.P.Q. at 1293 n.5 (“The patent disclosure must not be used as prior art”); *Vogel*, 422 F.2d at 442, 164 USPQ at 622 (in considering obviousness-type double patenting, “the patent disclosure may not be used as prior art”); *In re Plank*, 399 F.2d 241, 242, 158 U.S.P.Q. 328, 329 (C.C.P.A. 1968) (“Its claims are used as the basis for a double patenting rejection. It is not a prior art reference”); *In re Aldrich*, 398 F.2d 855, 859, 158 U.S.P.Q. 311, 314 (C.C.P.A. 1968) (“[P]atent claims are looked to only to see what has been patented, the subject matter which has been protected, not for something one may find to be disclosed by reading them.”)

In the instant case, the Examiner has improperly relied on the specification in making the obviousness-type double patenting rejection. Whether support is provided for the claim language is an issue separate from the scope of the claims in the determination of a double patenting rejection. The Examiner has confused the issue of claim support with the issue of claim interpretation in determining whether obviousness-type double patenting exists. Claim interpretation is limited to what the claim language defines as the

scope of the invention. By doing so, the Examiner has relied on specification support other than the specific portions of the disclosure supporting the claimed invention. Applicants have failed to follow the mandates as expressed in the M.P.E.P. thereby failing to establish a *prima facie* case of double patenting of the obviousness-type.

According to *In re Vogel*, one must first “determine how much of the patent disclosure pertains to the invention claimed in the patent” because only “[t]his portion of the specification supports the patent claims and may be considered.” The Examiner has disregarded this critical step in his analysis of the obviousness-type double patenting rejection.

(c) Best Mode

The scope of the invention is determined by the claim language. The best mode disclosed in the specification as interpreted by the Examiner does not define the boundaries of the claims when determining double patenting of the obviousness-type. Examiner has again improperly relied on the specification to interpret the scope of the invention while failing to analyze the pending claims on a limitation-by-limitation basis to demonstrate that no patentable distinctions exist between the pending claims and those in the issued Harvey patents.

In *In re Schneller*, 397 F.2d 350, 158 U.S.P.Q. 210 (C.C.P.A. 1968), the Schneller patent disclosed elements A, B, C, X, and Y as the best mode and claimed A, B, C, and X which covered other features incorporated in the claim because of the term “comprising”, thus effectively covering the combination A, B, C, X, and Y. The later filed application claimed elements A, B, C, and Y and elements A, B, C, X, and Y. Thus, making the new combination would merely exercise skill or ingenuity expected of a person with ordinary skill in the art because X and Y were both known in the art.

The court in *In re Schneller* noted the uniqueness of the factual circumstances surrounding the element composition of the application which involved the substitution of element X for element Y, rather than the addition or subtraction of an element from the patent's claims.²² The court went on to state that "[this] is not a case of an improvement or modification invented after filing . . . Hence it is not the usual 'obviousness-type' double patenting case."²³ Thus, the court limited the applicability of this holding. The Examiner has not offered any proof that *Schneller*'s use of the disclosed best mode may be properly applied to the facts of the instant application. More specifically, the instant case does not involve the substitution of one element (X) for another element (Y) where the rest of the claimed subject matter (ABC) is well known and where the two elements (X and Y) are also known in the art.

While *In re Schneller* relied on a disclosed best mode of ABCXY in finding a non-statutory double patenting rejection, the Examiner's use of a best mode to find all variations obvious is unwarranted. An allegation of an improper extension of a unified system monopoly cannot be supported without examining the scope of the claims. In *In re Schneller*, the court specifically cited and analyzed both the claims in the patent and the elements in the claims in the *Schneller* application. The court then clearly demonstrated how the claims in the patent read on the claims in the application to support the double patenting rejection. The Office Action fails to provide such an analysis.

(d) Means Plus Function

In interpreting "means plus function" language, the Federal Circuit held *In re Lonardo*, 119 F.3d 960, 43 U.S.P.Q.2d 1262 (Fed. Cir. 1997) that under 35 U.S.C. § 112, sixth paragraph²⁴, correct interpretation of the means plus function element must be in

²² 397 F.2d at 353-54.

²³ *Id.*

²⁴ See *In re Donaldson*, 16 F.3d 1189, 1193, 29 USPQ2d 1845, 1849 (Fed. Cir. 1994).

light of the disclosed structure for implementing the function, and in a manner that is expressly recited in the claim.²⁵ The PTO must apply 35 U.S.C. §112, sixth paragraph, in appropriate cases, and give claims their broadest reasonable interpretation in light of and consistent with the written description of the invention in the application.²⁶

**(2) Establishing Variations between the Invention Claimed
and the Invention Defined in the Patent Claims**

Based on the proper identification of each of the inventions, *supra*, the Examiner then must identify the variation(s) between the inventions being claimed in the application and the invention as defined by the claims in the patent.

As discussed above, the Examiner has not properly identified the inventions. In fact, the Examiner has failed to analyze and interpret the claims on a limitation-by-limitation basis to demonstrate that no patentable distinctions exist between the pending claims and those in the issued Harvey patents. Rather, in an attempt to address the variations between the inventions, the Examiner provides broad allegations that “no pending claim is more than an obvious variation....” (Office Action at 181.) However, the Examiner has failed to specifically identify these variations. Such blanket assertions do not fulfill the requirement of identifying variations between the invention claimed and the invention defined by the patent claims, as mandated by the M.P.E.P.

As to paragraph 23, the Examiner presents a weak attempt at establishing variations between the invention claimed and the invention defined in the patent claims. More specifically, the Examiner states that “[t]he differences are suggested ... by the art above.” (Office Action at 181.) The Examiner erroneously believes that incorporating any differences merely **suggested** (and not necessarily explicitly stated) by any and all prior art discussed throughout entire Office Action is proper. The Examiner is required to

²⁵ *In re Lonardo*, 43 USPQ2d at 1267.

²⁶ *In re Donaldson*, 16 F.3d at 1194.

identify the variations between the inventions being claimed and the invention as defined by the patent claims. Placing the burden on Applicants to sift through the Office Action to locate any and all discussions of the differences suggested, explicitly and/or implicitly, by the prior art is contrary to law. There is no statutory basis for Examiner's version of identifying variations between the sets of claims at issue.

Applicants provide Appendix B herewith, which identify Applicants' patentable subject matter of the instant claims over specific Applicants' patented claims in response to Appendix A of the Office Action.

(3) Variations Would Have Been Obvious to a Person of Ordinary Skill in the Art

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 U.S.P.Q. 459 (1966) that establish a background for determining obviousness under 35 U.S.C. § 103 are employed when making an obviousness-type double patenting analysis. However, the "patent principally underlying the double patenting rejection is not considered prior art."²⁷ The factual inquiries are summarized as follows:

- (A) Determine the scope and content of the patent claim and the prior art relative to the claim in the application at issue;
- (B) Determine the differences between the scope and content of the patent claim and the prior art as determined in (A) and the claim in the application at issue;
- (C) Determine the level of ordinary skill in the pertinent art; and
- (D) Evaluate any objective indicia of nonobviousness.²⁸

Additionally, the Federal Circuit held in *Kaplan* that obviousness-type double patenting rejections must include clear evidence to establish why an alleged variation of an invention claimed in a prior patent would have been obvious.

²⁷ *In re Longi*, 759 F.2d at 892, n.4 (citing *In re Braithwaite*, 379 F.2d 594, 600 n.4, 54 CCPA 1589, 154 USPQ 29 (CCPA 1967)).

²⁸ M.P.E.P. § 804 (II) B (1).

[T]here must be some clear evidence to establish why the variation would have been obvious which can properly qualify as "prior art." Even if obviousness of the variation is predicated on the level of skill in the art, prior art evidence is needed to show what the level of skill was.²⁹

Otherwise, if no clear prior art evidence establishes that the variation(s) in the application claims are obvious over the invention defined by the claims of the patent, one can assume that the characteristic of the claims including the variation(s),

appear that the invention covered by the later patent was a separate invention, distinctly different and independent from that covered by the first patent; in other words, it must be something substantially different from that comprehended in the first patent. It must consist in something more than a mere distinction of the breadth or scope of the claims of each patent.³⁰

As discussed above, the Examiner has failed to properly identify the inventions as claimed and has further failed to identify the variations as required for a proper obviousness-type double patenting rejection. Nonstatutory double patenting is intended to prevent prolongation of the patent term by prohibiting the extension of patent monopolies in successive patents. While the prohibition of extending patent monopolies is a policy concern, a statement of motivation for establishing obviousness under 35 U.S.C. § 103 is nevertheless lacking. Because Examiner has not provided any evidence that establishes that the variations are obvious over the invention as defined by the claims, the claims of the instant application may be assumed to be a separate and distinct invention.

Under paragraph 30, in an attempt to address the obviousness of the variations, the Examiner states that "[t]he provision of any such differences would have been obvious for the benefit of providing greater functionality to the user" (Office Action at

²⁹ *Id.* at 683.

³⁰ *Miller v. Eagle Mfg. Co.*, 151 U.S. at 198.

144.) The Examiner provides a single statement of motivation to address any differences without positively identifying the differences.

This statement lacks the proper motivation for establishing obviousness under 35 U.S.C. § 103 for at least the following reasons. First, “for the benefit of providing greater functionality to the user” does not answer the question of whether the differences would have been obvious to one of ordinary skill in the art. This attempt at providing motivation fails to take into consideration the level of ordinary skill at the time of the invention. To determine whether greater functionality provides adequate motivation, the Examiner should take into consideration (among other things) the level of ordinary skill in the art, as expressly provided in M.P.E.P § 804 (II)B(1) and *Graham v. John Deere Co.*³¹ A proper motivation statement takes into consideration what would have been obvious to someone with ordinary skill in the art at the time of the invention. Without this determination, a modification cannot be deemed obvious for “greater functionality”. Examiner attempts to provide the level of ordinary skill in the art on pages 123-128. However, the Examiner nevertheless fails to provide a teaching as to how the differences would have been obvious. A variation may not be assumed to be obvious merely because greater functionality is alleged to be provided. The Examiner has failed to provide a proper statement of motivation.

Second, Examiner’s statement of motivation is overly broad. The statement of “greater functionality to the user” does not adequately provide a teaching to one of ordinary skill in the art. According to the Examiner’s reasoning, any and all differences between sets of claims, whether novel or not, will be considered obvious due to “greater functionality”. The Examiner’s version of motivation is improper and erroneous.

Third, while a variation provides “greater functionality”, it may also be considered novel and non-obvious. For example, while an improvement on a widget

³¹ 383 U.S.1, 148 USPQ 459 (1966).

provides “greater functionality”, the improvement may just as well be novel and therefore merit patent protection. Non-obvious improvements provide “greater functionality” to the user. Likewise, a mere change in color may also provide greater functionality to the user. However, based on the level of ordinary skill in the art at the time of the invention, a mere color change may be considered to be an obvious variation. Because Examiner’s version of motivation may be construed in two dynamically different ways, the motivation statement of providing “greater functionality to the user”, as applied to “any such differences” is clearly deficient.

5. Conclusion

The Examiner’s basis for the double patenting rejections is inconsistent with the Patent Office Procedures found in the M.P.E.P. The Examiner has fatally misapplied and confused the established law of double patenting. The belief that if two claims in separate applications are supported by the same embodiment in the application’s common specification as being a *prima facie* basis for obviousness-type double patenting rejections is not supported by the rules and procedures as set forth in the M.P.E.P. Furthermore, the Examiner has not cited any case law or any other authority, for that matter, for this erroneous basis.

To establish a proper obviousness-type double patenting rejection, the PTO must show that (1) the inventions claimed (2) are not patentably distinct and (3) are based on a *prima facie* showing of obviousness. According to § 804 of the M.P.E.P, any obviousness-type double patenting rejection should make clear the differences between the inventions defined by the conflicting claims; and the reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim in issue is an obvious variation of the invention defined in a claim in the patent. As discussed above,

the Examiner has not identified the claimed inventions; established variations; or shown that variations would have been obvious to a person of ordinary skill in the art.

Therefore, the Examiner has failed to properly establish a *prima facie* basis for a double patenting rejection of the obviousness type. Applicants respectfully request withdrawal of the rejection of all pending claims.

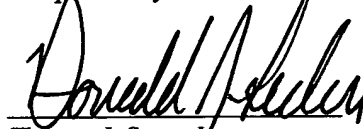
III. CONCLUSION

In accordance with the foregoing it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. Further, all pending claims are patentably distinguishable over the prior art of record, taken in any proper combination. Thus, there being no further outstanding objections or rejections, the application is submitted as being in a condition for allowance, which action is earnestly solicited.

If the Examiner has any remaining informalities to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such informalities.

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APPENDIX A

SPECIFICATION SUPPORT

TO

PARENT 1981 APPLICATION

AND

INSTANT APPLICATION

Claim Language		Support to parent application filed November 3, 1981.	Support to instant specification.
		Reference	Language
2. A method of gathering information on the use of	Column 15 lines 27-30.	FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programming usage and associated uses of other data transmissions and equipment.	Page 312 line 33 to page 313 line 8. Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing ...
a control signal at	Column 2 lines 63-64.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit.	[Signal processor 200 in Fig. 7 and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage.
a receiver station, said receiver station having	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
a plurality of inputs,	Column 6 lines 26-30.	As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.
a processor,	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
<p>and a least one controllable device, said receiver station transferring said gathered information to a remote station, said method comprising the steps of:</p>	Column 8 lines 46-50.	<p>programming and a broadcast television input is shown in Figure 1.</p> <p>See Figs. 6F & G.</p> <p>The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.</p>	<p>that conveys both television and radio programming and a broadcast television input.</p> <p>See Fig. 7.</p> <p>Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...</p> <p>The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.</p> <p>... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.</p>		
	Column 9 lines 65-68.	<p>[Controller, 20] instructs processor or monitor, 12, how to identify what signals to pass externally and where to pass them and what signals to transfer to buffer/comparator, 14.</p>	<p>Executing said information causes control processor, 39J, in the predetermined fashion of the said information that is preprogrammed at said RAM at the time of execution by virtue of being so loaded prior to being so executed, to locate the location of that particular instance of controlled-function-invoking information that is "100110" (which is the execute-conditional-overlay-at-205 information that causes control processor, 39J, to execute the controlled function of said conditional-overlay-at-205 instruction) and modify the information at said location to be "111111".</p> <p>(The term "signal unit" hereinafter means one complete signal instruction or information message unit.</p>	<p>Page 33 lines 18-20.</p> <p>Page 273 lines 4-6.</p> <p>Page 273 lines 21-25.</p> <p>Page 283 lines 24-33.</p>	
	Column 2 lines 63-64.	<p>(The term "signal unit" hereinafter means one complete signal instruction or information message unit.</p>	<p>Accordingly, when the second message of the "Wall Street Week" program of example #6 is</p>	<p>Page 14 lines 26-27.</p>	
searching for said control signal in an	Column 7 lines 50-54.	<p>Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words</p>		<p>Page 284 lines 10-19.</p>	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
input data stream based on said step of identifying;			and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.		transmitted with its "11111" execution segment, said message is processed at those stations that are preprogrammed with said information of decryption key J precisely as the second message of example #3 is processed at said stations. (At all other stations, all information of said message is automatically discarded because the "11111" information of its execution segment fails to match any preprogrammed controlled-function-invoking information.)
				Page 163 lines 25-27.	Example #3 begins, like example #1, with divider, 4, transferring the embedded information of the first message to decoder, 203.
				Page 166 lines 11-13.	Then automatically control processor, 39J, executes a second step of receiving SPAM signal information and receives the execution segment information in said first message.
				Page 166 line 30 to page 167 line 3.	Then control processor, 39J, processes said execution segment information. Automatically, control processor, 39J, selects information of the first X bits of information at said SPAM-input-signal memory immediately after the first H bits, records said information of X bits at said SPAM-exec memory, and compares the information at said SPAM-exec memory with controlled-function-invoking information that is preprogrammed at the RAM and/or ROM associated with said processor, 39J.
				Page 181 lines 21-23.	Subsequently, the embedded information of the second message of the "Wall Street Week" program is inputted to decoder, 203.
				Page 182 lines 16-19.	Not resulting in a match causes control processor, 39J, first, to execute the aforementioned evaluate-message-content

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
<p>passing said control signal from said processor to said at least one controllable device based on said step of searching; and</p>	Column 7 lines 50-58.	<p>Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.</p>	<p>Page 182 line 35 to page 183 line 7.</p>	<p>instructions then to receive and process the execution segment information in said second message.</p> <p>Automatically, control processor, 39J, selects information of the first X bits of information at said SPAM-input-signal memory immediately after the first H bits, records said information of X bits at said SPAM-exec memory, and compares the information at said SPAM-exec memory with controlled-function-invoking information that is preprogrammed at the RAM and/or ROM associated with said processor, 39J.</p>
	<p>Column 17 lines 62-65.</p>	<p>Signal processor, 200, is always operating and monitors all incoming channels. It can convey such signals to microcomputer, 205, whenever it receives them.</p>	<p>Page 284 lines 10-19.</p> <p>Page 182 line 35 to page 183 line 15.</p>	<p>Accordingly, when the second message of the "Wall Street Week" program of example #6 is transmitted with its "111111" execution segment, said message is processed at those stations that are preprogrammed with said information of decryption key J precisely as the second message of example #3 is processed at said stations. (At all other stations, all information of said message is automatically discarded because the "111111" information of its execution segment fails to match any preprogrammed controlled-function-invoking information.)</p> <p>Automatically, control processor, 39J, selects information of the first X bits of information at said SPAM-input-signal memory immediately after the first H bits, records said information of X bits at said SPAM-exec memory, and compares the information at said SPAM-exec memory with controlled-function-invoking information that is preprogrammed at the RAM and/or ROM associated with said processor, 39J. A match results with the aforementioned execute-conditional-overlay-at-205 information that is identical to the execute-conditional-overlay-</p>

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
			<p>at-205 information preprogrammed at SPAM-controller, 205C, of example #1. Said match causes control processor, 39J, to execute the aforementioned conditional-overlay-at-205 instructions. Said instructions cause SPAM-controller, 205C, to execute "GRAPHICS ON" at the PC-MicroKey System of microcomputer, 205, ...</p> <p>At the subscriber station of Fig. 3 (and at URS microcomputers, 205, at other subscriber stations), said instruction, "GRAPHICS ON", causes said PC-MicroKey System to combine the programming of Fig. 1A and of Fig. 1B and transmit the combined programming to monitor, 202M, where Fig. 1C is displayed.</p> <p>Page 189 lines 18-23.</p>
communicating information on the passing of said control signal from said receiver station to said remote station.	<p>Column 7 lines 50-54.</p> <p>Column 7 lines 65-67.</p> <p>Column 8 lines 4-7.</p> <p>Column 9 lines 8-13.</p>	<p>Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.</p> <p>Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.</p> <p>Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.</p> <p>Digital recorder, 16, can tell the controller, 20, when it reaches predetermined levels of fullness to permit the controller, 20, to instruct auto dialer, 24, to contact an appropriate remote site allowing the recorder, 16, to output its data making memory available.</p> <p>Page 190 lines 25-32.</p> <p>Page 192 lines 4-7.</p> <p>Page 192 line 33 to page 193 line 10.</p>	<p>At signal processor, 200, receiving said 2nd monitor information (#3) causes buffer/comparator, 14, to determine that the header information, in said 2nd monitor information (#3), that identifies a transmission of monitor information matches the aforementioned monitored-instruction-fulfilled-identification information which causes buffer/comparator, 14, to input said 2nd monitor information (#3) to onboard controller, 14A.</p> <p>The new information content of the 2nd monitor information (#3) causes controller, 20, to modify the information of said new monitor record in a particular fashion.</p> <p>The particular overlay information of the command meter-monitor segment of the 2nd monitor information (#3) also provides new information. Controller, 20, uses said particular overlay information in several fashions. It records in a particular field of said new monitor record a count, starting with "1" for said first overlay, of the number of</p>

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		<p>overlays processed in the course of said program unit. It increments by one a separate monitor record count of the aggregate number of overlays displayed at monitor, 202M, over a particular calendar month period. And it increments by one a separate monitor record count of the aggregate number of combinings processed by all receiver station apparatus over a particular time period.</p> <p>In examples #3, #4, and #5, the transmission of SPAM signal information causes signal processor, 200, to transfer signal record information by telephone to remote station computers.</p> <p>In each example, when the automatic processing caused by the received SPAM signal information reaches the point at which recorder, 16, finishes recording the first signal record information transferred from buffer/comparator, 14, recorder, 16, measures the quantity of its recording capacity that holds signal records, in a predetermined fashion, and determines that said quantity is equal to or greater than said particular fullness information. Said determining causes recorder, 16, to transfer a particular instruction to controller, 20, that causes controller, 20, to activate telephone connection, 22, and proceed with a particular preprogrammed telephone signal record transfer sequence that is fully automatic.</p> <p>Automatically, controller, 20, reestablishes telephone communications with said third computer and causes said third computer to transfer to controller, 20, its particular start signal. Then controller, 20, causes the transmitting of all recorded monitor records to said third computer.</p>
	<p>Page 271 line 33 to page 272 line 1.</p> <p>Page 272 line 26 to page 273 line 3.</p> <p>Page 276 lines 11-16.</p>	

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3. The method of Claim 2 wherein said receiver station is a television receiver station receiving signals containing television programming information.	Column 6 lines 30-41.	<p>The cable transmission is input simultaneously to switch 1 and mixer 2. The broadcast transmission is input to switch 1. Switch 1 and mixers 2 and 3 are all controlled by local oscillator and switch control 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer 3 which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.</p>	Page 29 lines 15-26.	<p>The cable transmission is inputted simultaneously to switch, 1, and mixer, 2. The broadcast transmission is inputted to switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.</p>
	Column 4 lines 18-25.	<p>In television they may appear on one line in the video portion of the transmission, or on a portion of one line, or on more than one line, and will probably lie outside the range of the television picture displayed on a normally tuned television set. In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear.</p>	Page 14 lines 6-14.	<p>In television they may appear on one line in the video portion of the transmission such as line 20 of the vertical interval, or on a portion of one line, or on more than one line, and they will probably lie outside the range of the television picture displayed on a normally tuned television set. In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear.</p>

4. The method of Claim 2 wherein said control signal in said step of identifying is directed to an external device.	Column 7 lines 50-58.	<p>Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed</p>	Page 31 lines 10-18.	<p>Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers</p>
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	Column 5 lines 4-7.	and passes them to appropriate jack ports for external transmission. From the processors and buffers, the signals may be transferred to external equipment such as computers, videotape recorders and players, etc.	Page 15 lines 30-32.	them to the appropriate port or ports for external transmission. From the processors and buffers, the signals may be transferred to external equipment such as computers, videotape recorders and players, etc.
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5. The method of Claim 4 wherein said external device is a storage device.	Column 11 lines 64-65.	... instructs the recorder/player, 76 or 78, to turn on and record the programing.	Page 329 line 15-16.	... to cause said selected recorder, 76 or 78, to turn on and record programming. ...
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6. The method of Claim 4 wherein said external device is a switch.	Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 31 to page 329 line 1.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programing transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
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7. The method of Claim 4 wherein said external device is a building facilities operating device.	Column 17 lines 55-56.	FIG 6A illustrates a method for governing a home or office environment.	Page 396 lines 31-33.	Fig. 7A illustrates methods for regulating automatically the environment of subscriber stations such as homes and offices.
	Column 18 lines 4-7.	Microcomputer, 205, uses such received signals, in a predetermined fashion, to govern the operation of furnace, 206, air conditioning system, 207, and window opening and closing means, 208.	Page 400 lines 19-22.	So executing said information causes microcomputer, 205, to reducing the power usage of said air conditioning system, 207, causes any open windows at said station to be closed.
			Page 401 lines 14-17.	In this fashion, SPAM messages can control

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				and regulate the operation of individual subscriber station controlled apparatus (the thermostat control of furnace, 206, for example, could be similarly controlled)
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8. The method of Claim 4 wherein said external device is a tuner.	Column 18 lines 62-65.	In a predetermined fashion, either microcomputer, 205, or signal processor, 200, instructs tuner, 223, to set cable converter box, 222, to the proper channel,...	Page 423 lines 11-13.	Receiving said message causes said controller, 20, to cause a selected cable converter box, 222, to receive the transmission identified by said channel mark; ...
			Page 424 lines 2-9.	Then receiving a particular to-223 instruction from said control processor, 20A, causes controller, 20, to transmits particular instructions, via said control information transmission link, to said tuner, 223, thereby causing said tuner, 223, to tune its associated cable converter box, 222, the to the particular channel transmission of said multi-channel cable transmission that is identified by said channel mark.

9. The method of Claim 4 wherein said external device is a computer.	Column 11 lines 12-14.	Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73.	Page 326 lines 16-18.	Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.
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10. The method of Claim 4 wherein said external device is a recorder.	Column 11 lines 64-65.	... instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 15-16.	... to cause said selected recorder, 76 or 78, to turn on and record programming, ...
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11. The method of Claim 4 wherein said	Column 11 lines 64-65.	... instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 15-16.	... to cause said selected recorder, 76 or 78, to turn on and record programming, ...
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external device is a printer.				
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12. The method of Claim 4 wherein said external device is a disk.	column 12 lines 3-8	... controller/computer, 73, can use techniques for reorganizing files stored on multidisk units, which techniques are well known to computer operators, and order the execution of such techniques by passing appropriate instructions to of matrix switch, 75, and recorder/ players, 76 and 78.	<p>Page 331 line 17 to page 334 line 6</p> <p>For example, page 331 lines 17-33.</p>	<p><i>See generally.</i></p> <p>Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D--are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first. According to the schedule recorded at computer, 73, Q should play first on the cable channel modulated by cable channel modulator, 83; then subsequently Y and W should start to play simultaneously on the channels modulated by modulators, 83 and 87 respectively; then D should play on the channel modulated by modulator, 83, immediately after Y ends. Caused to organize the locations of said units to play according to said schedule, computer 73, ...</p> <p>Determining said located space to be available causes computer, 73, to cause recorder, 76, to move forward or rewind to the start of program unit D; to cause recorder, 78, to rewind to the start of said located space; and to cause switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record for the duration of program unit D. ...</p>
			For example, page 332 lines 23-31.	

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			<p>Computer, 73, causes recorder, 78, to move forward or rewind to the start of program unit Y; causes recorder, 76, to rewind to the start of the available space; and causes switch, 75, to configure its switches so as to transfer the output of recorder, 78, to the input of recorder, 76. Computer, 73, causes recorder, 78, to play and recorder, 76, to record for the duration of program unit Y. ...</p> <p>In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder because unit D is scheduled to play on the same channel immediately after Y.</p>	<p>For example, page 333 lines 15-21.</p> <p>For example, page 334 lines 1-6.</p>	
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<p>13. A multimedia receiving apparatus for gathering information on the use of a signal at said apparatus comprising:</p>	Column 6 lines 23-26.	<p>A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.</p> <p>FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programming usage and associated uses of other data transmissions and equipment.</p>	<p>Page 29 lines 4-7.</p> <p>Page 312 line 33 to page 313 line 8.</p>	<p>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.</p> <p>Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing ...</p>
	Column 15 lines 27-30.			
			Page 28 lines 25-29.	<p>[Signal processor 200 in Fig. 7 and elsewhere] has capacity, at each station, for receiving monitor information that identifies what</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
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				programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage.
a plurality of input ports for receiving multimedia signals;	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1. See Fig. 1	Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. See Fig. 2.
an output port;	Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 31 lines 14-18.	If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
a processor operatively connected to said plurality of input ports and said output port;	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
said processor programmed for:	Column 8 lines 20-25.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22.	Page 33 lines 7-12.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22.
identifying a signal from at least one of said plurality of input ports;	Column 9 lines 65-68.	[Controller, 20] instructs processor or monitor, 12, how to identify what signals to pass externally and where to pass them and what signals to transfer to buffer/comparator, 14.	Page 438 lines 13-15.	... causing the apparatus of decoder, 30, to commence identifying and processing the individual SPAM messages embedded in said transmission.

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			Page 59 lines 31-33.	The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
passing said signal from said processor to said output port based on said step of identifying;	Column 7 lines 50-58.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 31 lines 10-18.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
communicating information of the passing of said identified signal based on said step of passing.	Column 7 lines 50-54. Column 7 lines 65-67.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 31 lines 10-14. Page 31 line 30 to page 32 line 6.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...
	Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.	Page 31 line 30 to page 32 line 1.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter,

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	Column 9 lines 8-13.	Digital recorder, 16, can tell the controller, 20, when it reaches predetermined levels of fullness to permit the controller, 20, to instruct auto dialer, 24, to contact an appropriate remote site allowing the recorder, 16, to output its data making memory available.	<p>Page 33 lines 4-6.</p> <p>Page 272 line 26 to page 273 line 8.</p> <p>Page 275 line 33 to page 276 line 2.</p>	<p>"signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...</p> <p>Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness.</p> <p>In each example, ... recorder, 16, measures the quantity of its recording capacity that holds signal records, in a predetermined fashion, and determines that said quantity is equal to or greater than said particular fullness information. Said determining causes recorder, 16, to transfer a particular instruct-to- call instruction to controller, 20, that causes controller, 20, to activate telephone connection, 22, and proceed with a particular preprogrammed telephone signal record transfer sequence that is fully automatic.</p> <p>The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number.</p> <p>Automatically said second computer responds with a particular transmission complete signal that causes controller, 20, to terminate said telephone call then to cause recorder, 16, to erase from memory all said meter charge information.</p>
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14. The apparatus of Claim 13 wherein said processor is programmed for: storing said information	Column 11 lines 57-60.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, ...	Page 329 line 2-20.	<p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given</p>
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on the passing of said identified signal on a storage device before said step of communicating; and				SPAM message that contains given "program unit identification code" information. ... Receiving said message causes computer, 73, to determine, ... that said "code" information matches ... schedule information of programming that is scheduled to be ... transmitted to the field system, 93, at a later time. So determining causes computer, 73, ... to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
delaying said step of communicating based on a predetermined condition.	Column 8 lines 16-19.	The predetermined fashion may include provisions whereby recorder, 16, informs controller, 20, automatically when it reaches a certain level of fullness.	Page 33 lines 4-6.	Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness.
	Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.	Page 33 lines 18-20. Page 273 lines 4-6.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor ... The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.
			Page 273 lines 21-25.	... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.

16. The apparatus of Claim 13 wherein said processor is further programmed for	Column 8 lines 7-12.	Buffer/comparator, 14, also has means for determining, in a predetermined fashion, when signals require transfer immediately to a remote site and for communicating	Page 32 lines 16-20.	Buffer/comparator, 14, also has means for transferring received information immediately to a remote site or sites via telephone connection, 22, and for communicating a
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communicating information from said apparatus to said remote data collection station using a telephone interface.	such a requirement to controller, 20, and such signals directly with the remote site via telephone connection, 22.	requirement for such transfer to controller, 20, which causes such transfer.
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17. The apparatus of Claim 13 where said output port is connected to an external device.	Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 31 lines 14-18.	If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
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18. The method of Claim 2 further comprising the step of: generating a bill for the use of said control signal at said remote station based on the identification and passing of said control signal at said receiver station.	Column 20 lines 56-57.	... that site can determine for billing purposes that the recipe was, ...	Page 44 lines 26-30.	... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ... Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information, ...
			Page 471 lines 26-31.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...
			Page 473 lines 3-8.	Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14,
	Column 20 line 57.	...first, ordered ...	Page 472 lines 23-27 with	

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		of signal processor, 200, which record contains particular program unit information and TV567# information.	
Column 20 lines 57-58.	... and, second, delivered.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#....	Page 471 lines 14-16.
		Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.	Page 473 line 29 to Page 474 line 1.
Column 20 lines 27-37.	Five minutes later,	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered- information-and-process instructions, ...	Page 471 line 26 to page 472 line 17.
	a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200.	
	This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,	Receiving said message causes controller, 20, to load and execute said check-for- entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause an instance of ...	
	instruct tuner, 223, to tune cable converter box, 222, to the appropriate	(An alternate method for inputting said second message to the microcomputers, 205,	Page 476 line 34 to Page 477 line 8.

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	channel to receive the recipe in encoded digital form	at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission of said that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.	
		In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....	Page 477 lines 8-17.
	and instruct control means, 226, to activate printer, 221.	... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...	Page 474 lines 3-7.
	Column 20 lines 37-42.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...	Page 477 lines 8-23.

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			<p>Page 281 lines 1-6.</p> <p>By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")</p>	<p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p>
	<p>which, in a predetermined fashion, signal processor, 200, decrypts and transfers</p>	<p>Page 282 line 2 to page 283 line 33.</p>		
	<p>to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.</p>	<p>Page 478 lines 1-5.</p>		

19. The method of Claim 2 further comprising the steps of:	Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the	Page 31 line 30 to page 32 line 1.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and
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storing information on the passing of said identified control signal on a storage device at said receiver station before said step of communicating; and		combined information to a digital recorder, 16.		from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...
delaying said step of communicating for a predetermined time.	Column 8 lines 16-19. Column 8 lines 20-25.	The predetermined fashion may include provisions whereby recorder, 16, informs controller, 20, automatically when it reaches a certain level of fullness. The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22.	Page 33 lines 4-6. Page 33 lines 7-12.	Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness. Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22.

20. The apparatus of Claim 13 wherein said output port is connected to an internal device.	Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 31 lines 14-18.	If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
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21. A method of communicating subscriber station information from a subscriber station to at least one remote collection station, said	Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.	Page 33 lines 18-20. Page 273 lines 4-6.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor ... The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.
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method comprising the steps of:		... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.	
inputting an instruct signal which is effective at said subscriber station to	Column 20 lines 27- 31.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...	Page 273 lines 21-25. Page 471 line 26 to page 472 line 17.
control an apparatus and	Column 20 lines 31-36.	This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	Page 471 line 26 to page 472 line 17. Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...

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			<p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p> <p>(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...</p> <p>Examples of signal words are a string of one</p>
		<p>Page 476 line 34 to page 477 line 8.</p> <p>Page 477 lines 8-17.</p> <p>Page 14 lines 27-29.</p>	
at least one of a code and	Column 2 lines 63-66.	<p>(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...</p> <p>Examples of signal words are a string of</p>	
a datum to	Column 3 lines 6-8.	<p>Page 14 line 35 to page</p>	

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<p>serve as evidence of at least one of</p> <p>passing of said instruct signal to a controllable apparatus and</p>	Column 20 lines 49-54.	<p>one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received.</p>	<p>15 line 2.</p> <p>Page 473 line 29 to page 474 line 1</p>
	Column 20 lines 31-36.	<p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to the appropriate converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...</p>	<p>Page 314 line 30-33.</p> <p>Page 471 line 26 to page 472 line 17.</p>
		<p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p> <p>At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p>	<p>or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p> <p>At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p>

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functioning of said controllable apparatus in response to said instruct signal;	<p>Column 20 lines 46-49.</p> <p>When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.</p>	<p>Page 476 line 34 to page 477 line 8.</p> <p>Page 477 lines 8-17.</p> <p>Page 473 lines 3-13.</p> <p>Page 477 lines 12-17.</p> <p>Page 477 lines 23-29.</p>
		<p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p> <p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe... instructions ...</p> <p>... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....</p> <p>... causes ... said decoder, 290, to detect and</p>

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			process properly the information of said second message.
			(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
			Receiving said output information causes printer, 221, to print the information of said specific recipe and list.
			Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...
			This base band signal is then transferred through separate paths to three separate detector devices.
			Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at
detecting the presence of at least one of an instruction,	Column 20 lines 27- 31.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 ...	Page 478 lines 1-5. Page 475 lines 1-2. Page 471 line 26 to page 472 line 17.
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.
and said at least one of a code and a datum, which is effective at	Column 20 line 49-52.	Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via	Page 473 line 29 to page 474 line 1

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said subscriber station to at least one of		processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16.	microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
(i) generate at least one of subscriber station specific datum and	Column 8 lines 2-4.	Buffer/comparator, 14, is connected to clock, 18, and has means for adding information such as time of receipt, for example, to signals.	At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.
(ii) select and assemble a plurality of subscriber station specific data into a record;	Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.	Buffer/comparator, 14, receives time information from clock, 18, and has means for incorporating time information into signal records.
			... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
			Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
	Column 9 line 68 to column 10 line 2.	The controller, 20, instructs buffer/comparator, 14, what signals to discard and how to mark signals and assemble signal strings.	Buffer/comparator, 14, operates under control of controller, 20, ...
			Said match causes controller, 20, to execute said instructions. Under control of said first

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processing at the subscriber station at least one locally inputted datum and performing,					set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter & monitor information from (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing information from clock, 18.
				Page 224 lines 12-18.	When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion then discard all information of said record from its memory and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion.
processing at the subscriber station at least one locally inputted datum and performing,		Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.	Page 472 lines 23-27.	... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
				Page 473 line 29 to page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion

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<p>in response to said detected at least one of an instruction and said at least one of a code and a datum, at least one of:</p>	Column 20 lines 49-54.	Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received.	<p>described above.</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p> <p>At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.</p>
	Column 20 lines 27-31.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 ...	<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...</p>
	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or	(The term "signal unit" hereinafter means one complete signal instruction or information

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	Column 3 lines 6-8.	information message unit. Examples of signal units are a unique code identifying a programming unit, or a ... Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.		Page 14 line 35 to page 15 line 2.	message unit. Examples of signal units are a unique code identifying a programming unit, or a ... Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
(a) communicating said generated at least one subscriber station specific data to a transmitter; and	Column 9 lines 8-13.	Digital recorder, 16, can tell the controller, 20, when it reaches predetermined levels of fullness to permit the controller, 20, to instruct auto dialer, 24, to contact an appropriate remote site allowing the recorder, 16, to output its data making memory available.		Page 33 lines 4-6. Page 272 line 26 to page 273 line 8.	Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness. In each example, ... recorder, 16, measures the quantity of its recording capacity that holds signal records, in a predetermined fashion, and determines that said quantity is equal to or greater than said particular fullness information. Said determining causes recorder, 16, to transfer a particular instruct-to-call instruction to controller, 20, that causes controller, 20, to activate telephone connection, 22, and proceed with a particular preprogrammed telephone signal record transfer sequence that is fully automatic. The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Automatically said second computer responds with a particular transmission complete signal that causes controller, 20, to terminate said telephone call then to cause recorder, 16, to erase from memory all said meter charge information.
(b) communicating said record and said	Column 9 lines 8-13.	Digital recorder, 16, can tell the controller, 20, when it reaches predetermined levels of		Page 33 lines 4-6.	Recorder, 16, may inform controller, 20, automatically when it reaches a certain level

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selected specific plurality of subscriber specific data to a transmitter; and		fullness to permit the controller, 20, to instruct auto dialer, 24, to contact an appropriate remote site allowing the recorder, 16, to output its data making memory available.	<p>of fullness.</p> <p>In each example, ... recorder, 16, measures the quantity of its recording capacity that holds signal records, in a predetermined fashion, and determines that said quantity is equal to or greater than said particular fullness information. Said determining causes recorder, 16, to transfer a particular instruct-to- call instruction to controller, 20, that causes controller, 20, to activate telephone connection, 22, and proceed with a particular preprogrammed telephone signal record transfer sequence that is fully automatic.</p> <p>The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number.</p> <p>Automatically said second computer responds with a particular transmission complete signal that causes controller, 20, to terminate said telephone call then to cause recorder, 16, to erase from memory all said meter charge information.</p>
transmitting at least one of said communicated at least one generated subscriber station specific datum and said communicated record and plurality of subscriber specific data to said at least one remote collection station.	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	<p>Page 272 line 26 to page 273 line 8.</p> <p>Page 275 line 33 to page 276 line 2.</p> <p>Page 28 lines 25-35.</p> <p>[Signal processor in Fig.7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called</p>

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	that site can determine for billing purposes that the recipe was,		Page 44 lines 26-30. Page 471 lines 26-31. Page 473 lines 3-8.	<p>"ratings" stations that collect statistical data on programming availability and usage.</p> <p>... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information, ...</p> <p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...</p> <p>Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p> <p>Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567# ...</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal</p>
first, ordered			Page 472 lines 23-27 with Page 471 lines 14-16.	
and, second, delivered.			Page 473 line 29 to Page 474 line 1.	

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				record of meter information in the fashion described above.
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22. The method of claim 21, wherein said instruct signal is input by a subscriber, said method further comprising the steps of:	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
storing a subscriber instruction to receive at least one of specific mass medium programming, data, news items, and computer control ; instructions; and	Column 20 lines 26-27.	... to hold and process further in a predetermined fashion.	Page 471 lines 22-25.	Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.
receiving at least one of specific mass medium programming, data, news items, and computer control instructions in accordance with said instruction.	Column 20 lines 47.	[when the transmission] ... is received, box 222, transfers the transmission ...	Page 477 lines 12-17. Page 477 lines 23-29.	... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission causes ... said decoder, 290, to detect and process properly the information of said second message.

23. The method of claim 21, wherein said instruct signal is input	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in
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by a subscriber, said method further comprising the steps of:		Fig. 1), of signal processor, 200, ...		the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
storing a subscriber instruction to at least one of process and present at least one of mass medium programs, data, news items, and computer control instructions in a specific fashion; and at least one of processing and	Column 20 lines 26-27.	... to hold and process further in a predetermined fashion.	Page 471 lines 22-25.	Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.
presenting at least one of specific mass medium programs, data, news items, and computer control instructions in accordance with said instruction.	Column 20 line 49-52.	Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16.	Page 473 line 29 to page 474 line 1 Page 314 line 30-33.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above. At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.

24. The method of claim 21, wherein said instruct signal is	Column 6 lines 30-41.	The cable transmission is input simultaneously to switch 1 and mixer 2. The broadcast transmission is input to	Page 29 lines 15-26.	The cable transmission is inputted simultaneously to switch, 1, and mixer, 2. The broadcast transmission is inputted to
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<p>detected in an information transmission from a data or programming source, said method further comprising the steps of:</p>	<p>Column 6 lines 48-50.</p>	<p>switch 1. Switch 1 and mixers 2 and 3 are all controlled by local oscillator and switch control 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer 3 which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.</p> <p>This base band signal is then transmitted through separate paths to three separate detector devices.</p>	<p>switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.</p> <p>This base band signal is then transferred through separate paths to three separate detector devices.</p>
<p>programming a processor to respond to said instruct signal communicated from a data or programming source;</p>	<p>Column 18 lines 55-58.</p>	<p>... microcomputer, 205, instructs signal processor, 200, to hold examples of the sought for unique signals in its buffer/comparator, 8, and compare them with all incoming signals.</p>	<p>As Fig. 4 shows, ... in the preferred embodiment, microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.</p> <p>The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information of the particular identification information of the particular stocks in said portfolio ...</p> <p>One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T".</p> <p>... said controller, 39, to load the binary information of "T" ... of said message at</p>
			<p>Page 34 line 35 to page 35 line 1.</p> <p>Page 288 lines 13-20.</p> <p>Page 420 lines 6-20.</p> <p>Page 422 lines 33 to Page 423 line 4.</p>

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			the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.
inputting at least some of said information transmission to a control signal detector;	Column 9 lines 53-55.	The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.	<p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p>
			<p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p>
detecting said instruct signal in said information	Column 9 lines 55-57.	This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG.	<p>Page 257 line 24 to page 258 line 19.</p> <p>Page 265 line 27 to Page 266 line 21.</p> <p>Page 250 lines 13-17.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast,</p>

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transmission; and	2B.	of the first message of the "Wall Street Week" program which is the message of the first combining synchron command.	
		Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...	Page 251 lines 8-11.
		... said information to radio decoder, 42, which decodes the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.	Page 263 lines 19-24.
		In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.	Page 37 lines 26-28.
	Column 18 lines 59-62.	... cause said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.	Page 422 line 33 to Page 423 line 10.
passing said instruct signal to said processor.	Column 18 lines 59-62.	... cause said controller, 39, to load the binary information of "T" ... of said message at	Page 422 line 33 to Page 423 line 10.

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		and the channel identifier, in this illustration, to microcomputer, 205.		particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.
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25. A method of signal processing at a receiver station, said receiver station including	Column 19 lines 27-29.	... and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
			Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
			Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to

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		<p>microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...</p> <p>...instructions causes controller, 20, to switch power on to monitor, 202M, ...</p> <p>Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>	<p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-6.</p> <p>Page 451 lines 7-9.</p> <p>Page 445 line 24 to page 446 line 1.</p> <p>Page 26 lines 1-2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>... and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on ...</p> <p>This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p>
a receiver and	Column 19 lines 27-28.			
a processor, said method comprising the steps of:	Column 19 lines 63-64.			

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receiving at said receiver identification signals that identify specific signal content for at least one of a plurality of one of concurrent	Column 19 lines 14-20.	... pass all program and channel identifiers on all programming being cablecast on the multi-channel system.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C ...
			Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.
			Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...
			Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter-monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if
		Page 435 lines 16-18.	
		Page 248 lines 22-26 from example #5.	
		Page 250 lines 13-16 from example #5.	
		Page 252 lines 15-35 from example #5.	

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		said program is of interest, ...	
		All eight of said messages are commands. The 1st-and 3rd-new -program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)	Page 267 lines 20-28 from example #5.
	Signal processor, 200, receives this instruction from microcomputer, 205,	... microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.	Page 288 lines 16-20.
	which reacts in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...	Page 435 lines 16-18.
		All eight of said messages are commands. The 1st-and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)	Page 267 lines 20-28.
		In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...	Page 435 lines 16-25.

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broadcast and cablecast signal transmissions;	Column 6 lines 26-30.	As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	Page 29 lines 11-15.	apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station. The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	
providing a comparison signal to said processor;	Column 19 lines 5-8.	In another example, microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast.	Page 428 lines 21-26.	The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.	
comparing said comparison signal to said identification signals and generating a control signal identifying a desired one of said plurality of one of broadcast and cablecast signal transmission based on said step of comparing;	Column 19 lines 20-25.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	Page 436 line 9 to page 437 line 6.	Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CCI3 ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.	

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		<p>Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p>
		<p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p>
	<p>...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>Page 445 line 24 to page 446 line 1.</p>
<p>tuning said receiver, based on said generated control signal, to receive said desired one of said plurality of one of broadcast and cablecast signal transmissions;</p>	<p>Column 19 lines 27-29.</p>	<p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor,</p>

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inputting at least a portion of said desired signal transmission to said processor; and	Column 19 lines 60-65.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...		202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...	
				At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. Said signal instructs microcomputer, 205, ...	
responding to (i) an instruct signal detected in said desired signal transmission which is	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator,		Page 25 line 33 to page 26 line 2. Page 37 line 26 to page 38 line 8. Page 26 line 4.	
				In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...	

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effective to control a receiver station apparatus and	14.		<p>Page 267 lines 20-28 from example #5.</p> <p>Page 268 line 28 to page 269 line 12 from example #5.</p> <p>Page 31 line 30 to page 32 line 6.</p>	<p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)</p> <p>Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has</p>
(ii) a code or datum to serve as evidence of	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.		

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	Column 15 lines 57-60.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each.	Page 315 lines 20-24. Page 44 lines 26-32.	capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ... Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned. Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below. Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... monitor information that identifies what programming is available, ...
	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. ... that enables buffer/comparator, 8, among other things, to assemble signal units from signal words.	Page 49 line 26 to page 50 line 20. Page 28 lines 26-27. Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
the passing of said instruct signal to a controllable apparatus or	Column 7 lines 37-39.		Page 37 lines 22 to page 38 line 10.	Controller, 39, 44, or 47, is preprogrammed to receive units of signal information, to assemble said units into signal words that subscriber station apparatus can receive and

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Language				Language	
					<p>process, and to transfer said words to said apparatus. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions a subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. Said controller, 39, 44, or 47, has one or more output ports for communicating signal information to said apparatus.</p> <p>Fig. 3A shows one such preferred controller, 39.</p> <p>Buffer, 39C, and processor, 39D, are the second buffer and processor and perform protocol conversion functions.</p> <p>In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.</p> <p>If a signal or signals are to be transferred</p>
				Page 156 line 33.	
				Page 157 lines 5-7.	
				Page 14 lines 22-25.	
				Page 31 lines 14-18.	
				Column 7 lines 54-58.	

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<p>of the functioning of a controllable apparatus in response to said instruct signal.</p>	<p>Column 7 lines 50-60.</p>	<p>externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.</p> <p>Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.</p>	<p>externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.</p> <p>Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.</p>
<p>26. A method of controlling a remote intermediate transmitter station to communicate at least one instruct signal to at least one receiver station, with said remote transmitter station including</p>	<p>Column 19 lines 60-63.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.</p>	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00"</p>

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at least one of a broadcast and cablecast transmitter signal which is effective at a receiver station to instruct one of a computer and a processor,	Column 10 lines 24-28. Column 10 lines 15-23.	FIGS. 3A, 3B and 3C illustrates one instance of such use. FIGS. 3A, 3B, and 3C illustrate the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming. The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 324 lines 18-21. Page 324 lines 8-24.
a plurality of selective transfer devices each operatively connected to said at least one of said broadcast and said cablecast transmitter,	Column 10 lines 43-47. Column 10 lines 41-43. Column 10 lines 40-47.	... and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92. ... by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, ... All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video	... apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92. ... a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, Page 325 lines 1-4. Page 324 line 34-35. Page 324 line 31 to page 325 line 4.
		header, an execution segment, and a meter-monitor ... Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming. The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in

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a receiver for receiving said at least one instruct signal from at least one origination transmitter station	Column 10 lines 30-39.	recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.		the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	
	Column 19 lines 43-44.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.		The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.	
	Column 19 lines 60-63.	... instruction signals embedded in the "Wall Street Week" programming transmission.		... instruction signals embedded in the "Wall Street Week" programming transmission.	
		At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.		A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.	
		Page 25 line 34 to page 26 line 1.		At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.	
		Page 90 lines 4-7. Applicants teach this as the composition of the		The second message is of the information associated with the second combining synch command. Said second command has a "00"	

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a control signal detector, and	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...	instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 325 line 34 to page 326 line 7.
one of a controller and computer capable of controlling	Column 11 lines 15-17.	Cable program controller and computer, 73, is the central automatic control unit for the transmission facility.	header, an execution segment, and a meter-monitor ... At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;...
at least one of said plurality of selective transfer devices, and with said remote transmitter station adapted to	Column 11 lines 44-46.	Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. Cable program controller and computer, 73, is the central automatic control unit for the transmission station. Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78,
detect the presence of at least one control signal, and	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier,

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		their associated programming and ...	63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....
Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 59 lines 29-33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
Column 8 lines 58-59.	Control signals can be passed to the apparatus by means of the programming transmissions ...	Page 34 line 35 to page 35 line 1. Page 59 lines 29-33.	This base band signal is then transferred through separate paths to three separate detector devices. A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel
to deliver at said at least one of said broadcast and said cablecast transmitter said at least one instruct signal, said method comprising the steps of:			

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	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. ... instruction signals embedded in the "Wall Street Week" programming transmission.
receiving said at least one instruct signal and at least one of a code and a datum at said at least one origination transmitter station and	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			Page 25 lines 34-35.	At this point, an instruction signal is generated at said program originating studio, ...
			Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.
delivering said at least one instruct signal and said at least one of said code and said datum to at least one origination transmitter, said at least one instruct signal being	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.

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		Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
		Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
	Column 15 lines 57-60. The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each.	Page 315 lines 20-24.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
		Page 44 lines 26-32.	Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.
		Page 49 line 26 to page 50 line 20.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data.
		Page 28 lines 26-27.	... monitor information that identifies what

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<p>operative at said at least one receiver station to control at least one controllable apparatus,</p>	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	<p>programming is available, ...</p> <p>Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p>
	Column 19 lines 18-20.	<p>[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p>
			<p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ...</p> <p>Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of a available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its</p>

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said at least one of said code and said datum being operative at said station to serve as evidence of	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 31 line 30 to page 32 line 6.
at least one of passing of said at least one instruct signal to said at least one controllable apparatus	Column 8 lines 7-12.	Buffer/comparator, 14, also has means for determining, in a predetermined fashion, when signals require transfer immediately to a remote site and for communicating such a requirement to controller, 20, and such signals directly with the remote site via telephone connection, 22.	Page 32 lines 16-20.
and functioning of said at least one controllable apparatus in response to said at least one instruct signal;	Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.
	Column 7 lines 50-60.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12,	Page 31 lines 10-22.
		previously assigned name; for example, the 1st-old-radio-program-message (#5). Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ... Buffer/comparator, 14, also has means for transferring received information immediately to a remote site or sites via telephone connection, 22, and for communicating a requirement for such transfer to controller, 20, which causes such transfer. Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12. Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be	

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	<p>Column 11 lines 50-57.</p> <p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>		<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially</p>
<p>of said at least one instruct signal and said at least one of said code and said datum: and</p>	<p>Column 19 lines 60-63.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.</p>	<p>Page 59 lines 29-33.</p>	

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					transmitted SPAM messages.
				Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
				Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.		Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
	Column 19 lines 14-15.	... pass all program and channel identifiers on all programming being cablecast on the multi-channel system.		Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C ...
				Page 248 lines 22-26 from example #5.	Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.
				Page 250 lines 13-16 from example #5.	Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...
				Page 252 lines 15-35 from example #5.	Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter

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transmitting said at least one control signal to said at least one origination transmitter	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter- monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...
		Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
		Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially

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	<p>Column 11 lines 38-39.</p> <p>By comparing identification signals on the incoming programming ...</p>		<p>transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...</p>	<p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p>

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before a specific time.	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 28 lines 26-27. Page 49 lines 26-27. Page 326 line 33 to page 327 line 2.	... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information. Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...
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27. The method of claim 26, further comprising the step of embedding a specific one of said at least one control signal one of in	Column 4 lines 5-6. Column 11 lines 38-39.	These techniques employ signals embedded in programs. By comparing identification signals on the incoming programming ...	Page 13 lines 25-26. Page 327 line 35 to page 328 line 13.	The present invention employs signals embedded in programming. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original
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said instruct signal and in an information transmission containing said instruct signal before	Column 19 lines 43-44. Column 19 lines 43-44. Column 11 lines 38-43.	transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...	Page 84 lines 26-28.
		... monitor information that identifies what programming is available, ...	Page 28 lines 26-27.
		Meter-monitor segments contain meter information and/or monitor information.	Page 49 lines 26-27.
		... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.
		... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.
		Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	Page 327 line 35 to page 328 line 13.
		SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in	Page 84 lines 26-28.

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		television or radio or other programming transmissions ...
transmitting said instruct signal to said remote transmitter station.	Column 19 line 60 to column 20 line 1.	... monitor information that identifies what programming is available, ...
	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Meter-monitor segments contain meter information and/or monitor information.
	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;
	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then

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		The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...
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28. The method of claim 26, wherein said specific time is a scheduled time of transmitting one of said instruct signal and some information associated with said instruct signal from	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...
	Column 11 lines 21-22.	Such input information might include the cable television system's complete programming schedule, ...	Page 326 lines 30-31.	Such input information can include the complete programming schedule of the station of Fig. 6, ...
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming

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	<p>Column 12 lines 58-61.</p>	<p>transmissions ...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>... however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...</p>	
<p>said remote intermediate data transmitter station and said at least one control signal is effective at said remote intermediate data transmitter station to control at least one of said plurality of selective transmission devices</p>	<p>Column 11 lines 57-65.</p>	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 339 lines 11-23.</p> <p>Page 329 line 2-22.</p>	<p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its transmission inputted (via distribution</p>
	<p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.</p>		

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at different times.	Column 11 lines 30-31.	... transmit each program unit to cable field distribution system, 93.	Page 326 line 35 to page 327 line 2. Page 328 line 13.	amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming. ... each program unit, ... the station should transmit the unit, transmit the programming of each received program unit.
	Column 10 lines 49-52.	When played on video recorder and players, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted to the field.	Page 325 lines 6-9.	When played on video recorders, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted via switch 75 to field distribution system, 93.

29. A method of processing signals at a	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2. Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
receiver station having	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.

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a computer and a television monitor to deliver at the television monitor at least one of a combined and		Column 19 line 64 to column 20 line 2.	here can permit.	Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
sequential presentation of a program and a user specific output, said method comprising the steps of:		Column 19 lines 59-60.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
			Then the host says, "And here is what your portfolio did."	Page 451 line 3.	And the Fig. 1C combining is displayed.
		Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 25 lines 33-34.	Then the host says, "And here is what your portfolio did."
				Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
storing user data of interest;		Column 18 lines 45-47.	In this example, microprocessor, 205, is programmed to hold a portfolio of stocks ...	Page 420 lines 3-4.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks ...
receiving from a television programming source an information transmission containing television programming;		Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...
				Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new

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transferring said television programming to said television	Column 19 lines 23-29.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn	Page 437 lines 1-6.
			Page 439 lines 14-15.
			Page 436 line 9 to page 437 line 3.
		<p>programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-</p>	

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monitor and	video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	<p>on-CC13-at-particular-8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...</p> <p>... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p> <p>... and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance</p>
		<p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p> <p>Page 445 line 24 to page 446 line 1.</p> <p>Page 445 line 35 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p>

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displaying the television programming;	Column 19 lines 56-59.	The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.	Page 451 lines 25-32.
detecting in said information transmission at least one instruct signal which is	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p>
		<p>with said audio ...</p> <p>For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ...</p> <p>Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of</p>	

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operative to control a receiver station apparatus and at least	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.
	Column 7 lines 50-54.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.	Page 31 lines 10-14.
	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.
one of a code and a datum to serve as	Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 32 to page 15 line 2.
evidence of	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 31 line 30 to page 32 line 6.
available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)		This base band signal is then transferred through separate paths to three separate detector devices.	
		Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both.	
		(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	
		The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	
		Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has	

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(i) a passing of said at least one instruct signal to at least one controllable apparatus and	Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.	capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...	
	Column 7 lines 50-60.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 31 lines 10-22.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.	
controlling said computer based on said detected at least one instruct signal, said step of controlling comprising:	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.	
			Page 267 lines 20-28 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired	

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			programming.)
		Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...	Page 436 line 9 to page 437 line 3.
		Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.	Page 439 lines 14-15.
		Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.	Page 437 lines 1-6.
		... to receive the transmission of cable channel 13; ...	
		Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.	
		Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular	
	Column 19 lines 23-29.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	

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				apparatus ...	
				Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...	
				... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...	
				... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...	
				... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.	
				... instructions causes controller, 20, to switch power on to monitor, 202M, ...	
				Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...	
				... and to tune monitor, 202M, in a predetermined fashion.	
				In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...	
				Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic	
				Page 295 lines 6-8.	
				Page 439 lines 9-15.	
				Page 445 lines 24-27.	
				Page 446 lines 18-23.	
				Page 445 line 24 to page 446 line 1.	
				Page 445 line 35 to page 446 line 1.	
				Page 446 lines 17-21.	
				Page 26 lines 4-10.	
				This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,	
				Column 19 line 64 to column 20 line 1.	

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		for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
selecting	Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
at least a portion	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
of said stored user data of interest;	Column 18 lines 45-47.	In this example, microprocessor, 205, is programmed to hold a portfolio of stocks ...	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks ...
communicating said selected at least said portion of said stored user data of interest to said television monitor; and subsequently	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
ceasing to communicate said select at least said portion to said	Column 20 lines 4-5.	... microcomputer, 205, ceases transmitting its own graphic to TV set, 202, causes microcomputer, 205, to cease overlaying the graphic information onto the received composite video and to commence

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television monitor; and				transmitting the received composite video transmission unmodified.
evidencing said functioning of said at least one controllable apparatus in response to said at least one instruct signal by	Column 7 lines 59-60.	If [a signal or signals] are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 31 lines 18-22.	If [a signal or signals] contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.
storing said at least one of said code and said datum in a record.	Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.	Page 31 line 30 to page 32 line 1.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...

30. The method of claim 29, further comprising one of: programming said receiver station to process viewer data of interest and to respond to at least one instruct signal associated with a television program;	Column 18 lines 45-47.	In this example, microprocessor, 205, is programmed to hold a portfolio of stocks ...	Page 420 lines 3-4.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks ...
	Column 19 lines 42-53.	Microcomputer, 205, is preprogramed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	Page 450 lines 31-32. Page 21 lines 20-24.	... caused his microcomputer, 205, to be preprogrammed as described above; ... Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
		When the "Wall Street Week" transmission	Page 451 lines 6-7.	When the "Wall Street Week" transmission

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		begins at 8:30 PM on a Friday evening, ...		begins at 8:30 PM on a Friday evening, ...	
		several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.		Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.	
		These signals instruct microcomputer, 205,		In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	
		to generate several graphic video overlays,		Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."	
				... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.	
				Page 23 line 35 to page 24 line 4.	
				Page 37 line 26 to page 38 line 8.	
				Page 24 lines 5-16.	
				Page 451 lines 7-11.	

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<p>which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to</p> <p>transmit these overlays to TV set, 202,</p> <p>upon command.</p>	<p>Page 19 line 29 to page 20 line 20.</p> <p>Page 26 lines 4-8.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	<p>Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a ...</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p>	

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receiving	Column 19 lines 63-66.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,	Page 26 lines 1-8. Page 37 line 26 to page 38 line 8.
a command	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 23 line 35 to page 24 line 16. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ... Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of

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	generate several graphic video overlays, ...	instructions that is loaded and run is called a "program instruction set.")	Page 451 lines 7-11.
	and to transmit these overlays to TV set, 202,	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.	Page 26 lines 4-8.
	upon command.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.	Page 44 lines 14-17.
		A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.	Page 26 lines 20-28.
		(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...	
one of embedded in and	Column 19 lines 39-41.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.	Page 449 lines 13-20.

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associated with	Column 19 lines 15-18.	Signal processor, 200, receives this instruction from microcomputer, 205, at its processor or monitor, 12, which reacts, ...	Page 288 lines 16-20.
a signal that contains a television program;	Column 19 lines 60-65.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...	<p>Page 25 line 33 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 line 4.</p>
storing a locally input command that one of designates and specifies one of:	Column 19 lines 5-8.	In another example, microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast.	<p>Page 428 lines 21-26.</p> <p>The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said</p>

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(1) a television program to be one of displayed and recorded;		Column 19 lines 23-29.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 437 lines 1-6.	station to view (or record) said "Wall Street Week" program when said program is transmitted. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; instructions causes controller, 20, ... to switch power on to video recorder/player, 217, controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program. ... instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a
				Page 295 lines 6-8.	
				Page 439 lines 9-15.	
				Page 445 lines 24-27.	
				Page 446 lines 18-23.	
				Page 445 line 24 to page 446 line 1.	
				Page 445 line 35 to	

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			page 446 line 1.	predetermined fashion.
(2) a fashion in which to present one of a television program and some computer output; and	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
		generate several graphic video overlays, ...	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
		and to transmit these overlays to TV set, 202,	Page 451 lines 7-11.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
		upon command.	Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
			Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes

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			<p>said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command ...</p>	
(3) a time in which to display one of some television programming and computer output;	Column 19 lines 20-29.	<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p> <p>Then, in a predetermined fashion, microcomputer, 205, may</p>	<p>Page 436 line 9 to page 437 line 6.</p>	<p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined</p>

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			Page 439 lines 9-15.	fashion, to prepare particular apparatusto cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert itsinstructions causes controller, 20, ...; to switch power on to video recorder/player, 217,controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program. ...instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M,and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
		instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 295 lines 6-8. Page 445 lines 24-27. Page 446 lines 18-23. Page 445 line 24 to page 446 line 1. Page 445 line 35 to page 446 line 1. Page 446 lines 17-21.	
controlling one of a processor and computer to process	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...

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<p>a viewer reaction to one of a unit of programming and an image displayed at said television monitor, said step of controlling comprising the steps of:</p> <p>(1) assembling a record that includes additional data besides said viewer reaction; and</p>	<p>Column 19 lines 67 to column 20 line 2.</p>	<p>The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p>	<p>Page 451 line 3.</p> <p>Page 26 lines 8-11.</p>	<p>And the Fig. 1C combining is displayed.</p> <p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p>	<p>... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p> <p>Buffer/comparator, 14, operates under control of controller, 20, ...</p> <p>Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter & monitor information from (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing information from clock, 18.</p> <p>When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion then discard all</p>
	<p>Column 20 lines 42-45.</p>	<p>Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer ...</p>	<p>Page 472 lines 23-27.</p>	<p>... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p>	
	<p>Column 9 line 68 to column 10 line 2.</p>	<p>The controller, 20, instructs buffer/comparator, 14, what signals to discard and how to mark signals and assemble signal strings.</p>	<p>Page 32 lines 20-21.</p> <p>Page 223 lines 22-33.</p>	<p>Buffer/comparator, 14, operates under control of controller, 20, ...</p> <p>Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter & monitor information from (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing information from clock, 18.</p>	
			<p>Page 224 lines 12-18.</p>		

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(2) transmitting said record to a remote data collection station; and	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	Page 28 lines 25-35.	information of said record from its memory and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion.
		that site can determine for billing purposes that the recipe was,	Page 44 lines 26-30.	[Signal processor in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
			Page 471 lines 26-31.	... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ... Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,....
		first, ordered	Page 473 lines 3-8.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...
			Page 472 lines 23-27	Executing said instructions also causes

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			with	controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
			Page 471 lines 14-16.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...
		and, second, delivered.	Page 473 line 29 to Page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe-... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
	Column 9 lines 8-13.	Digital recorder, 16, can tell the controller, 20, when it reaches predetermined levels of fullness to permit the controller, 20, to instruct auto dialer, 24, to contact an appropriate remote site allowing the recorder, 16, to output its data making memory available.	Page 33 lines 4-6.	Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness.
			Page 272 line 26 to page 273 line 8.	In each example, ... recorder, 16, measures the quantity of its recording capacity that holds signal records, in a predetermined fashion, and determines that said quantity is equal to or greater than said particular fullness information. Said determining causes recorder, 16, to transfer a particular instruct-to- call instruction to controller, 20, that causes controller, 20, to activate telephone connection, 22, and proceed with a particular preprogrammed telephone signal record transfer sequence that is fully automatic. The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. Controller, 20, transfers the telephone number,

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		1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Automatically said second computer responds with a particular transmission complete signal that causes controller, 20, to terminate said telephone call then to cause recorder, 16, to erase from memory all said meter charge information.	Page 275 line 33 to page 276 line 2.
controlling one of a processor and computer to process a viewer reaction to one of a unit of programming and	Column 20 lines 31-33. Column 20 lines 19-26.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ... Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station. Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.	Page 472 lines 15-17. Page 471 lines 6-25.
an image displayed at said television monitor,	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks'	Page 451 line 3.

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		Reference	Language	Reference	Language
said step of controlling comprising the steps of:			performance overlay the studio generated graphic.	Page 26 lines 8-11.	TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
(1) detecting a datum that identifies one of a unit of programming and		Column 18 lines 30-35.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...	Page 408 lines 18-29	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion.
				Page 414 lines 13-27	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.
				Page 15 lines 16-22	The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...
				Page 411 lines 10-15	... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of

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an image displayed at said television monitor; and	Column 16 lines 18-21.	Page 418 line 23 to page 419 line 15. Page 322 line 26 to page 323 line 11.	example #3 above. Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission. The programming of said "Wall Street Week" program is received at tuner, 215, and displayed at monitor, 202M. Accordingly, transmitting said messages will also cause the decoder associated with tuner, 215-- decoder, 282--to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is identical to said 1st monitor information (#3) and 2nd monitor information (#3) except that the source mark information identifies decoder, 282, rather than decoder, 203. Likewise, unless the Fig. 1B information overlaid at microcomputer, 205, covers and obliterates the embedded information of said messages that is inputted from divider, 4, to microcomputer, 205, and would otherwise be transmitted to monitor, 202M, in the combined programming outputted by microcomputer, 205, (which covering and obliterating does not occur in example #3), transmitting said messages will also cause the decoder, 145, to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is also identical to said 1st and 2nd monitor information (#3) except that the source mark information identifies decoder, 145.
(2) transmitting	Column 18 lines 36-37.	Page 411 line 28 to	In the fashion of example #3 above,

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said datum to a remote data collection station;	transmission to a remote data collection site.	page 412 line 2. Page 419 lines 4-15. Page 28 lines 25-35.	receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission. [Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
controlling one of a processor and computer to process	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
a viewer reaction to a one of unit of programming and	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a	Page 471 lines 6-25.	Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed

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an image displayed at said television monitor, said step of controlling comprising the steps of:	Column 19 lines 67 to column 20 line 2.	printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further ...	copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station. Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory. And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
(1) storing a datum that identifies one of a unit of programming and	Column 18 lines 30-37.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion. Periodically thereafter, said program originating studio embeds in said transmission

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					and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44. The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ... Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus. ... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above. Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of
			Page 15 lines 16-22		
	The processors, 204 and 210, transfer this information to signal processor, 200,		Page 36 lines 32-33.		
			Page 38 lines 11-14.		
			Page 411 lines 10-15		
			Page 418 line 23 to page 419 line 15.		

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		for recording and subsequent transmission to a remote data collection site.	<p>Page 411 line 28 to page 412 line 2.</p> <p>Page 173 line 30 to page 174 line 23 from example #3.</p> <p>Page 419 lines 4-15.</p> <p>Page 28 lines 25-35.</p>	<p>monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor</p>

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an image displayed at said television monitor; and	Column 16 lines 18-21.	TV signal decoder, 145, for TV set, 144 (which may receive programming inputs and associated signals generated or transferred by microcomputer, 142).	<p>information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>The programming of said "Wall Street Week" program is received at tuner, 215, and displayed at monitor, 202M. Accordingly, transmitting said messages will also cause the decoder associated with tuner, 215-- decoder, 282--to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is identical to said 1st monitor information (#3) and 2nd monitor information (#3) except that the source mark information identifies decoder, 282, rather than decoder, 203. Likewise, unless the Fig. 1B information overlaid at microcomputer, 205, covers and obliterates the embedded information of said messages that is inputted from divider, 4, to microcomputer, 205, and would otherwise be transmitted to monitor, 202M, in the combined programming outputted by microcomputer, 205, (which covering and obliterating does not occur in example #3), transmitting said messages will also cause the decoder, 145, to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is also identical to said 1st and 2nd monitor information (#3) except that the source mark information identifies decoder, 145.</p>
(2) passing data of one of (i) the availability, (ii) use and	Column 18 lines 30-37.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210	<p>Page 322 line 26 -- Page 323 line 11.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ...</p>

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(iii) usage of one of programming and	<p>respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,</p> <p>The processors, 204 and 210, transfer this information to signal processor, 200,</p>	<p>a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p> <p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of</p>	<p>Page 414 lines 13-27</p> <p>Page 15 lines 16-22</p> <p>Page 36 lines 32-33.</p> <p>Page 38 lines 11-14.</p> <p>Page 411 lines 10-15</p>

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<p>said data to one of a processor and computer that controls one of the selection and communication of program materials at said receiver station; and</p>		Column 16 lines 18-21.	<p>TV signal decoder, 145, for TV set, 144 (which may receive programming inputs and associated signals generated or transferred by microcomputer, 142).</p>	Page 28 lines 25-35.	<p>third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p>
				Page 322 line 26 – Page 323 line 11.	<p>The programming of said "Wall Street Week" program is received at tuner, 215, and displayed at monitor, 202M. Accordingly, transmitting said messages will also cause the decoder associated with tuner, 215-- decoder, 282--to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is identical to said 1st monitor information (#3) and 2nd monitor information (#3) except that the source mark information identifies decoder, 282, rather than decoder, 203. Likewise, unless the Fig. 1B information overlaid at microcomputer, 205, covers and obliterates the embedded information of said messages that is inputted from divider, 4, to microcomputer, 205, and would otherwise be transmitted to monitor, 202M, in the combined programming outputted by microcomputer, 205, (which covering and obliterating does not occur in example #3), transmitting said messages will also cause the decoder, 145, to detect, process,</p>

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controlling one of a processor and computer to process		Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	and transmit monitor information of said messages to onboard controller, 14A, that is also identical to said 1st and 2nd monitor information (#3) except that the source mark information identifies decoder, 145.
a viewer reaction to one of a unit of programming and		Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 25 line 34 to page 26 line 2. Page 37 line 26 to page 38 line 8.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ... At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...
				Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then

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an image displayed at said television monitor, said step of controlling comprising the steps of:	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	<p>Page 451 line 3.</p> <p>Page 451 line 3.</p> <p>Page 26 lines 8-11.</p>
(1) one of controlling a receiver to receive and a storage location to communicate a unit of programming associated with said unit of programming or image or in response to said viewer reaction; and	Column 20 lines 31-36.	<p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...</p>	<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said</p>
			<p>Page 471 line 26 to page 472 line 17.</p> <p>Page 476 line 34 to page 477 line 8.</p>

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					<p>"Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p>
(2) outputting said unit of programming at an output device of said receiver station.	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 473 lines 3-13.	Page 477 lines 8-17.	<p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe... instructions ...</p> <p>... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....</p> <p>... causes ... said decoder, 290, to detect and process properly the information of said second message.</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any</p>
			Page 477 lines 12-17.	Page 477 lines 23-29.	
			Page 478 lines 1-5.		

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			of the methods described above--for example, in the method of the first message of example #4.)
		Page 475 lines 1-2.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.

31. A method of generating and encoding signals to control a presentation comprising the steps of:	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			At this point, an instruction signal is generated at said program originating studio, ...
			The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.
			Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	
	Column 19 lines 31-34.	FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.

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receiving and storing a program that contains video information;	Column 19 lines 25-27. Column 19 line 53-56.	... and [microcomputer, 205,] may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ... Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	page 450 line 27 to page 451 line 11. Page 445 lines 24-27. Page 446 lines 18-23. Page 25 lines 26-33.
		(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.) Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed. But the combining of Fig. 1C is just part of a larger process. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first. ... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program. During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated	

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receiving at least one instruction	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	Page 59 lines 29-33.
and at least one of code and a datum,	Column 2 lines 63-66. Column 3 lines 3-8.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ... The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 25 lines 34-35. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 14 lines 27-29.
said at least one instruction having effect at a user station	<i>In General</i> Column 17 lines 39-44.	Signal processor apparatus have the ability to identify instruction and information signals in one or more	<i>In General</i> Page 15 lines 16-23.
graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.		A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. At this point, an instruction signal is generated at said program originating studio, ... The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205. (The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ... The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or	

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to control at least one controllable apparatus,		inputted television and radio programming transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed, and transfer such signals to such equipment as directed.	series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus ... A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ... Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	<i>Specifically</i> Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 34 lines 24-26. Page 44 lines 14-15. Page 95 lines 18-21.
said at least one of said code and said datum having effect at said user station to serve as evidence of at least one of	Column 16 lines 25-32.	One particular advantage of these methods for monitoring programming is that, by locating the identifier signals in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods	<i>Specifically</i> Page 26 lines 1-2. Page 37 line 26 to page 38 line 8. Page 319 lines 23-30.

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		Reference	Language	Reference	Language
passing of said at least one instruction to said at least one controllable apparatus and	Column 15 lines 43-44. Column 15 lines 52-56.	provide techniques for gathering statistics on what is recorded on video cassette recorders and on how people replay such recordings. ... each unit has an appropriate associated signal decoder. If a unit like the microcomputer can receive transmissions from more than one source or of more than one kind—television, radio, or other—it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.	for gathering statistics on what is recorded, for example, on video and audio cassette recorders and on how people replay such recordings. Associated with each intermediate apparatus and output apparatus is one or more appropriate decoders. If a given intermediate or output apparatus can receive transmissions from more than one source or of more than one kind—television, radio, or other—it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.	Page 314 lines 20-21. Page 317 lines 2-6.	
at least one function performed by said at least one controllable apparatus in response to said at least one instruction;	Column 17 lines 13-16.	Every instruction or information signal transmitted from processor, 140, to microcomputer, 142, is also transmitted to signal processor, 130, ...	Decoder, 203, has means for detecting SPAM information in any programming transmission inputted to its associated apparatus, microcomputer, 205, and not only for detecting and transferring to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message of said transmissions but also for inputting selected detected information to microcomputer, 205, and for controlling microcomputer, 205, in selected fashions. (Fig. 5 also shows that decoder, 203, has capacity for inputting detected information to signal processor, 200, and for receiving from and transferring control information to signal processor, 200.)	Page 315 line 30 to page 316 line 6.	
encoding said at least one instruction, wherein said step of encoding	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.	Page 59 lines 29-33.	

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Claim Language	Reference	Language	Reference
			<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...</p> <p>... identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus ...</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ...</p> <p>Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to</p>
	<p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7.</p> <p>Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 14 line 35 to page 15 line 2.</p> <p><i>In General</i> Page 15 lines 16-23.</p> <p>Page 34 lines 24-26.</p> <p>Page 44 lines 14-15.</p> <p>Page 95 lines 18-21.</p>		
<p>translating said at least one instruction to at least one control signal, said at least one control signal for directing a processor at said user station to control said at least one controllable apparatus;</p>	<p>Column 3 lines 6-8.</p> <p><i>In General</i> Column 17 lines 39- 44.</p>	<p>Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed, and transfer such signals to such equipment as directed.</p>	

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	<p><i>Specifically</i> Column 19 lines 63-64.</p>	<p>This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p>	<p><i>Specifically</i> Page 26 lines 1-2. Page 37 line 26 to page 38 line 8.</p>	<p>microcomputer, 205. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>	
<p>storing said at least one control signal from said step of encoding in conjunction with said program; and</p>	<p>Column 19 lines 24-25. Column 19 lines 43-44. Column 16 lines 25-32.</p>	<p>... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X...</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>One particular advantage of these methods for monitoring programming is that, by locating the identifier signals in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded on video cassette recorders and on how people replay such recordings.</p>	<p>Page 295 lines 6-8. Page 439 lines 9-15. Page 21 lines 23-24. Page 319 lines 23-30.</p>	<p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;...</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>One particular advantage of these methods for monitoring programming is that, by embedding the SPAM information in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded, for example, on video and audio cassette recorders and on how people replay such recordings.</p>	

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<p>storing said at least one of said code and said datum from said step of receiving in conjunction with said program and said at least one control signal.</p>	<p>Column 19 lines 20-25.</p>	<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...</p>	<p>Page 436 line 9 to page 437 line 6.</p>	<p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatusto cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p>
			<p>Page 439 lines 9-15.</p>	
			<p>Page 295 lines 6-8.</p>	

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Claim Language	Reference	Language	Reference
		...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...	Page 439 lines 9-15.
	Column 16 lines 25-32.	One particular advantage of these methods for monitoring programming is that, by locating the identifier signals in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded on video cassette recorders and on how people replay such recordings.	Page 319 lines 23-30.
		One particular advantage of these methods for monitoring programming is that, by embedding the SPAM information in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded, for example, on video and audio cassette recorders and on how people replay such recordings.	
32. The method of claim 31, wherein supplemental program material is to be stored at the same location as said processor and wherein said control signal from said step of encoding	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to generate several graphic video overlays, ... and to transmit these overlays to TV set, 202,	Page 23 line 35 to page 24 line 16. Page 451 lines 7-11. Page 26 lines 4-8.
		Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")	
		... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.	
		Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic	

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<p>directs said processor to generate a video overlay that is coordinated with said video information in said program, said method further comprising one step of the group consisting of:</p>	<p>Column 19 lines 60 to page 20 line 2.</p>	<p>upon command.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p>	<p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p> <p>Page 25 line 34 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes a subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred;</p>

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		and to transfer said signals to said apparatus ...
		Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
		And the Fig. 1C combining is displayed.
storing said supplemental program material in conjunction with said program and said control signal; and	Column 11 lines 57-65.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes
	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 26 lines 4-11. Page 451 line 3. Page 329 line 2-22.

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Column 19 lines 42-53.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	Page 450 lines 31-32. Page 21 lines 20-24.	said selected recorder, 76 or 78, to record said programming. ... caused his microcomputer, 205, to be preprogrammed as described above; ... Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 451 lines 6-7. Page 23 line 35 to page 24 line 4.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ... Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
		Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	These signals instruct microcomputer, 205,	Page 24 lines 5-16.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk

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		drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."	
		... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.	Page 451 lines 7-11.
	to generate several graphic video overlays,	Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.	Page 19 line 29 to page 20 line 20.
	which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to		
	transmit these overlays to TV set, 202,	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.	Page 26 lines 4-8.
	upon command.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a ...	Page 44 lines 14-17.

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		(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes a subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchronizing command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchronizing command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)	Page 26 lines 20-28.
storing a second control signal in conjunction with said program and said control signal from said step of encoding,	Column 19 lines 25-27.	... and [microcomputer, 205,] may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...	Page 445 lines 24-27.
	Column 8 lines 60-62.	An example of such a control signal is an instruction for the apparatus to contact a remote telephone unit.	Page 446 lines 18-23.
			Page 402 lines 22-26.
			Page 403 lines 7-12.
			Page 405 lines 20-29.
		... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...	
		... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.	
		... causes said controller, 20, again to cause said switch, 1, and said mixer, 3, to input the transmission of said master channel to said decoder, 30, and to cause said decoder, 30, to commence processing to detect a SPAM end of file signal.	
		Said message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30.	
		Receiving said message causes said controller, 39, to transmit said Read-Meters-of-Selected-Stations SPAM message to the controller, 20, of the signal processor, 200, of said station.	
		Executing said ones causes controller, 20, to transmit the current reading information of utilities meter, 262, to a remote metering station computer and cause said computer to process said information. Automatically,	

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said second control signal having effect at a user station to one of query a remote station and receive said supplemental program material in a broadcast or cablecast transmission.	Column 19 lines 37-39.	[Microcomputer, 205,] may receive these directly or it may automatically query a data service for them in a predetermined fashion.	Page 449 lines 26-35.	controller, 20, ... activates telephone connection, 22; inputs a particular telephone number ... Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.

33. The method of claim 31, wherein said control signal from said step of encoding directs said processor to generate a video overlay that is coordinated with said video information in said program, said	Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from	Page 25 line 34 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, 205; ...

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Claim Language		Language		Language	
method further comprising one step of the group consisting of:		processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...	
		Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.		And the Fig. 1C combining is displayed.	
transmitting a combined video signal from said video program and said video overlay generated by said processor over one of a broadcast and cablecast network to a plurality of receiver stations; and		One method provides a technique whereby a broadcast or cablecast transmission facility can duplicate the operation of a television studio automatically through the use of instruction and information signals embedded in programming either supplied from a remote source or sources or prerecorded.		It is the further purpose of this invention to provide means and methods for the automation of intermediate transmission stations that receive and retransmit programming. The programming may be delivered by any means including over-the-air, hard-wire, and manual means. The stations may transmit programming over-the-air (hereinafter, "broadcast") or over hard-wire (hereinafter, "cablecast").	
		... the present invention has capacity for transmitting data and control instructions in the same information stream to many different		the same information stream to many different	

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	Column 19 lines 56-59.	The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.	Page 451 lines 25-32.
transmitting a combined video signal from said program and said video overlay generated by said processor to a co-located video display.	Column 19 lines 63-66.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,	Page 26 lines 1-8.
		apparatus at a given subscriber station, for causing computers to generate and transmit programming, ... For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.	
		Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.	
		In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus	Page 37 line 26 to page 38 line 8.

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	Column 19 line 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 8-11.	... TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
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34. The method of claim 31, further comprising the steps of: receiving a second instruction, said second instruction being one of the group consisting of:	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			Page 25 lines 34-35.	At this point, an instruction signal is generated at said program originating studio, ...
	Column 20 lines 33-36.	... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 476 line 34 to page 477 line 8.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205. (An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the

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Reference		Language		Reference	
(1) an instruction which is effective at a user station to generate some output to be associated with said program;	Column 19 lines 45-53.			Page 477 lines 8-17.	information of said second message to the microcomputer, 205, of said station. In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....
	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.			Page 451 lines 6-7. Page 23 line 35 to page 24 line 4.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ... Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
	These signals instruct microcomputer, 205,			Page 37 line 26 to page 38 line 8. Page 24 lines 5-16.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information

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			<p>of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."</p> <p>...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating a computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular</p>
	to generate several graphic video overlays,	Page 451 lines 7-11.	
	which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to	Page 19 line 29 to page 20 line 20.	
	transmit these overlays to TV set, 202,	Page 26 lines 4-8.	
	upon command.	Page 44 lines 14-17.	

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		subscriber station apparatus and that causes said apparatus to perform a particular function or functions. (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)	Page 26 lines 20-28.
(2) an instruction which is effective at a user station to generate some output to be associated with	Column 20 lines 27-33.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, ...	Page 471 line 26 to page 472 line 17.
	Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer	Page 472 lines 23-27.
		Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV 567# information exists at said last-local-input-memory and to causeExecuting said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record	

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	and all necessary equipment was enabled.		<p>Page 473 line 29 to page 474 line 1.</p> <p>Page 471 line 8.</p> <p>Page 476 line 34 to page 477 line 8.</p> <p>Page 477 lines 8-17.</p>	<p>contains particular program unit information and TV567# information.</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p> <p>... your own printed copy ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....</p>
a product, service, or	<p>Column 20 line 21.</p> <p>Column 20 lines 33-36.</p>	<p>... a printed copy ...</p> <p>... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...</p>		

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Claim Language	Reference	Reference	Language
information presentation;	Column 20 line 49-52.	Page 473 line 29 to page 474 line 1 Page 314 line 30-33.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above. At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.
(3) an instruction which is effective at a user station to display one of a combined and	Column 19 lines 60 to page 20 line 2.	Page 25 line 34 to page 26 line 2. Page 37 line 26 to page 38 line 8.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...

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sequential presentation of a mass medium program and	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	<p>Page 26 lines 4-11.</p> <p>Page 451 line 3.</p> <p>Page 445 line 24 to page 446 line 1.</p>
a user specific datum;	<p>Column 19 lines 59-60.</p> <p>Column 19 line 60 to column 20 line 1.</p>	<p>Then the host says, "And here is what your portfolio did."</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p>	<p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>Then the host says, "And here is what your portfolio did."</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p>

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(4) an instruction which is effective at a user station to process				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...
				Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function
		Column 20 lines 27-33.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, ...		

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a user reaction to said program;	Column 20 lines 19-26.	Page 471 lines 6-25.	instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause ... Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station. Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.
(5) an instruction which is effective at a user station to communicate to a remote station	Column 13 lines 17-20.	Page 291 lines 9-24	In the interval between said commence-enabling time and said 8:30 PM time, said head end is caused, ... to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions and particular enable-WSW instructions that include

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		<p>particular enable-WSW-programming information, ... <i>on the frequency of said master control channel</i>. (Hereinafter said message is called the "local-cable-enabling-message (#7):")</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...</p>
		<p>In example #7, the controller, 20, of the signal processor, 200, of Fig. 4 is preprogrammed at a particular time with particular information that indicates that the subscriber of said station wishes to view said "Wall Street Week" program when transmission of said program on cable channel 13 commences.</p>
		<p>particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system</p>
		<p>Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission.</p>
		<p>Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, ...</p>
		<p>And for example, determining that a local station is not preprogrammed properly and/or that decryption, ... apparatus are not functioning correctly may cause apparatus of said station ... interrogate remote station</p>
		<p>Page 289 lines 22-27</p>
		<p>Page 290 lines 28-29</p>
		<p>Page 298 lines 17-21.</p>
		<p>Page 299 lines 19-22.</p>
		<p>Page 311 line 33 to page 312 line 8.</p>
<p>one of a query in respect of information to be associated with said program and to enable display of said</p>	<p>Column 15 lines 20-25.</p>	<p>In any of the cases illustrated in FIGs 4A through 4E, signal processors, 100, 103, 106, 109, and 112, could also operate in a predetermined fashion and telephone a remote site to get an additional signal or</p>

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program;	signals necessary for the proper decryption and/or transfer of incoming programming transmissions.	<p>apparatus, by telephone, for cipher key and/or cipher algorithm instructions and information. And for example, the transmitted programming ...</p> <p>At each station where a match fails to occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion....</p> <p>... each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly ...</p> <p>At each station where a ... a match does not result--which indicates that a decryptor, 224 or 231, is not decrypting its received information correctly ...</p>
(6) an instruction which is effective at a user station to control a user station to receive information to supplement said program;	<p>Five minutes later,</p> <p>a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.</p> <p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,</p>	<p>Page 293 lines 32-35.</p> <p>Page 301 lines 6-9.</p> <p>Page 308 line 35 to page 309 line 3.</p> <p>Page 471 line 26 to page 472 line 17.</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200.</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory and to cause an instance of ...</p>

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		instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	Page 476 line 34 to page 477 line 8.
			(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.
			In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...
(7) an instruction which is effective at a user station to process a digital television signal ; and	Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 25 line 34 to page 26 line 2.
			At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...
			In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be

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		required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...	
		Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	Page 26 lines 4-11.
		And the Fig. 1C combining is displayed.	Page 451 line 3.
(8) an instruction which is effective at a user station to serve as a basis for one of	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18. Page 267 lines 20-28 from example #5.
		All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)	Page 436 line 9 to page 437 line 3.
		Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ...	

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(i) enabling an output device to display at least some of said program and					the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...
					Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.
					Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.
				Page 439 lines 14-15.	... to receive the transmission of cable channel 13; ...
			...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
		Column 19 lines 27-29.		Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and

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(ii) enabling a processor to process some	Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 25 line 34 to page 26 line 2.	audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...	
			Page 37 line 26 to page 38 line 8.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	
		This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And	

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encoding said second instruction, said second step of encoding translating said second instruction to		Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	above program instruction set provide another example of a combining synch command ...
a second control signal, said second control signal for directing said ancillary processor to perform said specified second effect indicated by said second instruction with said program; and		Column 17 lines 39-46.	Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed, and transfer such signals to such equipment as directed. This permits many valuable techniques for facilitating the operation of such external equipment.	Page 15 lines 16-23. Page 34 lines 24-26. Page 44 lines 14-15. Page 95 lines 18-21. Page 390 lines 26-29.	<p>The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...</p> <p>... identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus ...</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ...</p> <p>Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205.</p> <p>The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ultimate receiver stations in varieties of ways.</p>
storing said second control signal from said second step of encoding		Column 11 lines 57-65.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed	Page 329 line 2-22.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause

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in conjunction with said program.		transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.	
	Column 4 lines 5-9.	These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, ...	Page 13 lines 25-28.
		the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.	
		The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.	

35. The method of claim 31, further having one from the group consisting of: embedding said control signal in the non-visible	Column 4 lines 18-22.	In television they may appear on one line in the video portion of the transmission, or on a portion of one line, or on more than one line, and will probably lie outside the range of the television picture displayed on a normally tuned television set.	Page 14 lines 6-11.
		In television they may appear on one line in the video portion of the transmission such as line 20 of the vertical interval, or on a portion of one line, or on more than one line, and they will probably lie outside the range of the television picture displayed on a normally	

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portion of a television signal;				tuned television set.
embedding a code in said program that enables one of a computer and controller to control a presentation of said program in accordance with said control signal;	Column 4 lines 5-9.	These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, ...	Page 13 lines 25-28.	The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.
	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or one complete message unit . Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ...
	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...
			Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
			Page 436 line 9 to page 437 line 3.	Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW

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	<p>Column 19 lines 27-29.</p>	<p>...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>Page 439 lines 14-15.</p> <p>Page 445 line 24 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p>	<p>information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p>

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communicating a program unit identification code and storing said program unit identification code at a storage location associated with said program; and	Column 11 lines 57-65.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming. instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 2-22.
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.
		Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular programmed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming

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		<p>schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p>
communicating to and storing at a storage location associated with said program some information to evidence	Column 11 lines 57-65.	<p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.</p>	<p>Page 329 line 2-22.</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular programmed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution</p>

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	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	<p>amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message informing with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every</p>	<p>Page 327 line 35 to page 328 line 13.</p> <p>;</p> <p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 315 lines 20-24.</p>	
	Column 15 lines 57-60.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of			

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		each.	<p>Page 44 lines 26-32.</p>	<p>unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p> <p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. <p>... monitor information that identifies what programming is available, ...</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p>
<p>one of an availability, use, and usage of said program at a user station.</p>	<p>Column 18 lines 30-41.</p>	<p>TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,</p>	<p>Page 28 lines 26-27.</p>	<p>... monitor information that identifies what programming is available, ...</p>
			<p>Page 49 line 26 to page 50 line 20.</p>	<p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data.
			<p>Page 408 lines 18-29</p>	<p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.</p>
			<p>Page 414 lines 13-27</p>	<p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p>

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		Said message is detected at said decoder, 210, and inputted to said controller, 44.	
		The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...	Page 15 lines 16-22
	The processors, 204 and 210, transfer this information to signal processor, 200,	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.	Page 36 lines 32-33.
		Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.	Page 38 lines 11-14.
		... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.	Page 411 lines 10-15
		Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.	Page 418 line 23 to page 419 line 15.
	for recording and subsequent transmission	In the fashion of example #3 above, receiving	Page 411 line 28 to

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	to a remote data collection site.	page 412 line 2.
		<p>said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It</p>
		<p>Page 173 line 30 to page 174 line 23 from example #3.</p> <p>Page 419 lines 4-15.</p>
	<p>Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.</p>	<p>Page 28 lines 25-35.</p>

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			has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
			Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...

36. A method of controlling a network having a plurality	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p>
of receiver stations each of which	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS.	<p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 390 lines 30-35.</p>	<p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6;</p>

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includes a broadcast or cablecast signal receiver,	Column 6 lines 23-30.	6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 396 lines 8-10.
at least one processor,	Column 20 lines 31-33.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	Page 29 lines 4-15.
a signal detector, said signal detector	Column 6 lines 48-50.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.
adapted to receive signals from a broadcast or cablecast signal,	Column 8 lines 20-25.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.
said processor programmed to		See Figure 1.	See Figure 2.
		The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22.

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respond to signals from said detector, said method comprising the steps of:		Column 7 lines 50-58.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 31 lines 10-18.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
receiving at least one of a broadcast and a cablecast transmitter station		Column 10 lines 30-39.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.	Page 324 lines 23-31.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.
(i) at least one instruct signal which is effective at said plurality of receiver stations to control at least one controllable apparatus and		Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.
		Column 20 lines 31-37.	This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...

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		<p>channel to receive the recipe in encoded digital form and instruct control means, 226, to activate printer, 221.</p>	<p>476 line 34 to page 477 line 8.</p> <p>Page 477 lines 8-17.</p>	<p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p>

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(ii) at least one of a code and a datum to serve as		Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ...	Page 474 lines 3-7.	... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...
		Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 32 to page 15 line 2.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ...
	evidence of at least one of passing of said at least one instruct signal to at least one controllable apparatus and	Column 7 lines 50-60.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both . If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 31 lines 10-22.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
		Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 31 line 30 to page 32 line 6.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both . If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.
			Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said		Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said

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	Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.	Page 31 line 30 to page 32 line 1.
	Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.	Page 33 lines 18-20.
functioning of said at least one controllable apparatus in response to said at least one instruct signal;	Column 20 lines 49-54.	Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received.	Page 273 lines 4-6.
		... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.	Page 273 lines 21-25.
		Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal	Page 473 line 29 to page 474 line 1
		received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...	
		Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...	
		Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...	
		The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.	

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transferring said at least one instruct signal and said at least one of said code and said datum to at least one transmitter;	Column 10 lines 40-47.	All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	<p>record of meter information in the fashion described above.</p> <p>At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.</p> <p>Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p>
receiving at least one control signal at said transmitter station,	Column 10 lines 30-39.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.	<p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.</p>
said control signal designating at least one receiver station of said plurality of receiver	<p>Column 4 lines 5-6.</p> <p><i>In General,</i> Column 17 lines 39-44.</p>	<p>These techniques employ signals embedded in programs.</p> <p>Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming</p>	<p>The present invention employs signals embedded in programming.</p> <p>The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the</p>

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stations in which said at least one instruct signal is addressed; and	<p>transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed, and transfer such signals to such equipment as directed.</p> <p><i>Specifically</i> Column 20 lines 27-32.</p>	<p>transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...</p> <p>... identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus ...</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ...</p> <p>Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205.</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV 567# information exists at said last-local-input-memory ...</p>	<p>Page 34 lines 24-26.</p> <p>Page 44 lines 14-15.</p> <p>Page 95 lines 18-21.</p> <p><i>Specifically</i> Page 471 line 26 to page 472 line 17.</p>
transmitting said at	Column 10 lines 40-47.	All of these received transmissions feed	Page 324 line 31 to
		Each receiver/modulator/input apparatus, 53	

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least one control signal from said at least one transmitter, said at least one transmitter at least one of		into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	page 325 line 4.
broadcasting and cablecasting	Column 10 lines 15-20.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	Page 324 lines 8-17.
said at least one instruct signal,	Column 20 lines 27-37.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200,	Page 471 line 26 to page 472 line 17.
		through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92. The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions,	

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said at least one of said code and said datum, and			should, in a predetermined fashion,		and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause an instance of ...
			instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form	Page 476 line 34 to Page 477 line 8.	(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.
			and instruct control means, 226, to activate printer, 221.	Page 477 lines 8-17.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....
			(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of	Page 474 lines 3-7.	... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...
	Column 2 lines 63-66.		(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a	Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a

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	signal units are a unique code identifying a programming unit, or a ... The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, ...	unique code identifying a programming unit, or a ... The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...	Page 14 line 32 to page 15 line 2. Page 471 line 26 to page 472 line 17.
said at least one control signal to said plurality of receiver stations.	Column 3 lines 3-8. Column 20 lines 27-32.		
37. The method of claim 36, wherein one of said instruct signal and said control signal is embedded in one of the	Column 20 lines 27-29. Column 4 lines 5-6.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ... These techniques employ signals embedded in programs.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ... The present invention employs signals embedded in programming.

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non-visible portion of a television signal and a multichannel signal that contains video.	Column 4 lines 18-22.	In television they may appear on one line in the video portion of the transmission, or on a portion of one line, or on more than one line, and will probably lie outside the range of the television picture displayed on a normally tuned television set.	Page 14 lines 6-11.	In television they may appear on one line in the video portion of the transmission such as line 20 of the vertical interval, or on a portion of one line, or on more than one line, and they will probably lie outside the range of the television picture displayed on a normally tuned television set.
	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Page 470 lines 1-3 and Page 470 lines 9-12.	...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...
	Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.	Page 470 lines 19-21. Page 420 lines 21-29.	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M. Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions. The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.

38. The method of claim 36, wherein said at least one control	Column 11 lines 3-14.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from	Page 325 line 34 to page 326 line 11.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier,
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signal identifies		<p>63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station, automatically adds, in a predetermined fashion source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.</p>	
two of said plurality of receiver stations	Column 19 lines 63-64.	<p>Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.</p>	Page 326 lines 16-18.
asynchronously and each of said two receiver stations	Column 10 lines 15-20.	<p>This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p> <p>The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting</p>	<p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted</p>

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		programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.	
	Column 17 lines 47-53.	<p>FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.</p>	<p>Page 390 lines 30-35.</p>
receive and respond to said instruct signal	Column 11 lines 3-14.	<p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, along with information identifying the channel source of each signal, externally to code reader, 72. ...</p> <p>Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73.</p>	<p>Page 325 line 34 to page 326 line 11.</p>
		<p>many channels.</p>	
		<p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.</p> <p>Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.</p>	
		<p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station, automatically adds, in a predetermined fashion source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.</p>	
		<p>Code reader, 72, buffers and passes the received SPAM message information, with</p>	<p>Page 326 lines 16-18.</p>

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	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	source mark information, to cable program controller and computer, 73. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
asynchronously.	Column 10 lines 15-20.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.
	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
			Features, benefits, and modes of operation of

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				the station of Fig. 7 are demonstrated in the following individual examples.
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<p>39. The method of claim 36, wherein a switch communicates signals selectively from a receiver and a one of memory and recorder to a transmitter, said method further comprising one from the group consisting of:</p> <p>detecting a signal which is effective at the transmitter station to</p>		<p>Matrix Switch, 75, in Fig. 3B.</p> <p>TV receiver, 53, in Fig. 3A.</p> <p>VTR, 78, in Fig. 3B.</p> <p>Recorder and Player, 76, in Fig. 3B.</p> <p>Cable Channel Modulator, 83, in Fig. 3C.</p>	<p>Matrix Switch, 75, in Fig. 6A.</p> <p>TV receiver, 53, in Fig. 6A.</p> <p>78, in Fig. 6A.</p> <p>recorder/players, 76 and 78</p> <p>Recorder and Player, 76, in Fig. 6A.</p> <p>Cable Channel Modulator, 83, in Fig. 6B.</p>	
	<p>Column 11 lines 38-46.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p> <p>Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.</p>	<p>Page 327 line 35 to page 328 line 13.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>	

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instruct communication;				Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate television or radio or other programming transmissions....
				Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
				Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
				Page 328 lines 14-16.	Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...
	Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.		Page 328 line 31 to page 329 line 1.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via the programming amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
determining a specific signal source from which to communicate a signal to a transmitter;	Column 11 lines 50-54.	For example, if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, ...		Page 328 lines 22-31.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine ... that said "code" information matches ... schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87.
controlling said switch to communicate a signal to said	Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted		Page 328 line 31 to page 329 line 1.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer

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controlling said switch to communicate a signal from a selected signal source; and	Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 31 to page 329 line 1.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via the distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
controlling said switch to communicate to one of said memory and recorder a signal which is effective at the receiver station to instruct.	Column 11 lines 61-64.	... in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...	Page 329 lines 13-20.	... in its preprogrammed fashion, ... to ... record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.

40. The method of claim 36, wherein a controller controls a switch to communicate to a transmitter a selected signal, further comprising one from the group consisting of:	Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 31 to page 329 line 1.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via the distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
detecting a signal which is effective at the transmitter station to	Column 11 lines 38-46.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or

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instruct transmission;	Column 11 lines 50-57.	network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	
		SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....	Page 84 lines 26-28.
		... monitor information that identifies what programming is available, ...	Page 28 lines 26-27.
		Meter-monitor segments contain meter information and/or monitor information.	Page 49 lines 26-27.
		Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...	Page 328 lines 14-16.
		For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.	Page 328 line 22 to page 329 line 1.

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inputting to said controller a signal which is effective to	Column 11 lines 32-39.	By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75. By comparing identification signals on the incoming programming with the programming schedule ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ...
			Page 28 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
control said switch;	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of

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		leads to modulator, 87.		programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
controlling said switch to communicate one or more signals	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.
according to a transmission schedule;	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73,

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	head end facility should transmit the programming.				determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
				Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
				Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
				Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
controlling said switch to communicate from a specific one of a plurality of signal sources; and	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Column 11 lines 50-57.		Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission

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controlling said switch to communicate a signal to a selected one of a plurality of transmitters.				inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
	Column 19 lines 43-44. Column 10 lines 43-47.	... instruction signals embedded in the "Wall Street Week" programming transmission. ... and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 21 lines 23-24. Page 325 lines 1-4.	... instruction signals embedded in the "Wall Street Week" programming transmission. ... apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.

41. The method of claim 36, further comprising one from	Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and	Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field
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	Column 19 lines 14-15.	... pass all program and channel identifiers on all programming being cablecast on the multi-channel system.	<p>Page 435 lines 16-18.</p> <p>Page 248 lines 22-26 from example #5.</p> <p>Page 250 lines 13-16 from example #5.</p> <p>Page 252 lines 15-35 from example #5.</p>	<p>station ...</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C ...</p> <p>Via a conventional multi- channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...</p> <p>Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter- monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune</p>

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			<p>automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p>
transmitting to a receiver station	Column 12 lines 45-47.	Page 267 lines 20-28 from example #5.	<p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands</p>
a control signal to cause said receiver station	Column 19 lines 17-23.	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p>	<p>... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>

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			<p>are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30</p>	
to tune to	Column 19 lines 23-25.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	<p>Page 436 line 9 to page 437 line 3.</p> <p>Page 439 lines 14-15.</p> <p>Page 437 lines 1-6.</p>	

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a broadcast or cablecast transmission containing a specific instruct signal.	Column 6 lines 26-30.	As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	Page 439 lines 9-15.	information causes controller, 20, in a predetermined fashion, to prepare particular apparatus to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
			Page 295 lines 6-8.	
			Page 439 lines 9-15.	
			Page 29 lines 11-15.	The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.

42. The method of claim 36, wherein said at least one control signal further comprises downloadable executable code	Column 19 lines 43-49.	... instruction signals embedded in the "Wall Street Week" programming transmission. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
			Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
			Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.

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targeted to said processor at at least one of said plurality of receiver stations,	Column 19 lines 46-48.	<p>These signals instruct microcomputer, 205, ...</p> <p>... several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p>	<p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-6.</p> <p>Page 23 line 35 to page 24 line 4.</p>
said downloadable executable code programming one of the way and method	Column 19 lines 46-53.	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.</p>	<p>Page 37 line 26 to page 38 line 8</p> <p>Page 23 line 35 to page 24 line 16.</p>
		<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p>	

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		Language
<p>in which said at least one processor</p>	<p>Column 19 lines 48-53.</p>	<p>which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p>
		<p>Page 44 lines 14-17.</p>
		<p>Page 26 lines 20-28.</p>
<p>These signals instruct microcomputer, 205, to generate several graphic video overlays, ...</p>	<p>Column 19 lines 48-53.</p>	<p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p>
<p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p>	<p>Page 24 lines 5-16.</p>	<p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p>
<p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining</p>	<p>Page 451 lines 7-11.</p>	<p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining</p>

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responds to said instruct signal.		... which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to ...	Page 19 line 29 to page 20 line 20.	<p>of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating a computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p>
		... transmit these overlays to TV set, 202,...	Page 26 lines 4-8.	
	Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 26 lines 1-8.	

43. The method of claim 36, wherein at least one receiver station is adapted to detect the presence of	Column 9 lines 47-57.	The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be	Page 248 line 17 to page 249 line 5.	Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the
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one of said control signal and	selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.	standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.
		Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ... Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.
	Page 257 line 24 to page 258 line 19.	
	The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.	Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ... Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from
		Page 257 line 24 to page 258 line 19.

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		<p>the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synchron command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p> <p>... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.</p>
	<p>This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.</p>	<p>Page 265 line 27 to Page 266 line 21.</p>
		<p>Page 250 lines 13-17.</p>
		<p>Page 251 lines 8-11.</p>
		<p>Page 263 lines 19-24.</p>

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programmed to respond to said instruct signal	Column 19 lines 42-44.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	Page 37 lines 26-28.
<u>ONE OF:</u>	First Alternative		Page 21 lines 20-24.
on the basis of the location of a signal in an information transmission, said method further comprising the step of	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.
<u>OR</u>	Second Alternative Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 267 lines 20-28 from example #5.
		All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)	
		In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal	Page 435 lines 16-25.

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			Page 436 line 9 to page 437 line 3.		processor, 200, to input said message to the microcomputer, 205, of said station. Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information. Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. ... to receive the transmission of cable channel 13; ...
<u>ONE OF:</u> causing at least	First Alternative Column 19 lines 60-63.	At this point, an instruction signal is	Page 439 lines 14-15.		A SPAM message is the modality whereby the

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	<p>generated in the television studio originating the programming and is transmitted in the programming transmission.</p>	<p>original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p>
<p><u>OR</u></p> <p>causing at least</p>	<p>Second Alternative</p> <p>Column 11 lines 50-57.</p>	<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p>
	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular programmed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to</p>
	<p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 328 line 22 to page 329 line 1.</p>	

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some of said control signal	Column 19 lines 43-49.	... instruction signals embedded in the "Wall Street Week" programming transmission. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 21 lines 23-24. Page 451 lines 6-7. Page 23 line 35 to page 24 line 4.
		matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. ... instruction signals embedded in the "Wall Street Week" programming transmission. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ... Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.	
		In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	Page 37 line 26 to page 38 line 8.
or instruct signal to be transmitted		Microcomputer, 205, evaluates the initial signal word or words which instruct it to ... Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV	Page 24 lines 5-6. Page 26 lines 1-8.
	Column 19 lines 63-66.	These signals instruct microcomputer, 205, ... This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,	

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<p><u>ONE OF:</u></p> <p>in said location.</p>	<p>First Alternative</p> <p>Column 9 lines 31-33.</p>		<p>monitor, 202M.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...</p>
	<p>A digital signal is embedded by conventional generating and encoding means and transmitted in a television, radio or other transmission.</p>	<p>Page 37 line 26 to page 38 line 8.</p> <p>Page 22 lines 1-6.</p> <p>Page 14 line 35 to page 15 line 2.</p> <p>Page 36 lines 2-3.</p> <p>Page 36 lines 19-20.</p>	<p>... a first series of control instructions is generated, embedded sequentially on said line or lines of the vertical interval, and transmitted on the first and each successive frame of said television program transmission, signal unit by signal unit and word by word, until said series has been transmitted in full.</p> <p>Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>... processes signal information embedded in an inputted radio frequency.</p> <p>... processes signal information embedded in a frequency other than a television or radio frequency.</p>
<u>OR:</u>	Second Alternative		

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	Column 11 lines 46-50.	If incoming programming is meant for immediate transmission, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer incoming programming to the proper output channel.	Page 328 lines 18-22.
			Determining that particular incoming programming is scheduled for immediate retransmission can cause computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer said incoming programming to a scheduled output channel.
44. A method of delivering and	Column 19 lines 31-34.	FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	<p>Page 18 lines 24-27.</p> <p>page 450 line 27 to page 451 line 11.</p> <p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p>

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gathering information on the use of a signal in a communication	Column 15 lines 27-30.	Page 312 line 33 to page 313 line 8.	Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing ...
network, said network having	Column 15 lines 60-62.	Page 28 lines 25-29.	[Signal processor 200 in Fig. 7 and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage.
a transmitter station and	Column 10 lines 15-23.	Page 49 lines 26-28. Page 50 lines 1-4.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... origins of transmissions (eg., network so source stations, broadcast stations, cable head end stations); dates and times ...
a receiver station, said transmitter station	Column 17 lines 47-53.	Page 324 lines 8-24. Page 390 lines 30-35.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ... Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber

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communicating			office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.		station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
commands directed to a	Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.		Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
				Page 25 line 34 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.	Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and

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computer program at said receiver station	Column 20 lines 5-7.	<p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p> <p>... and [microcomputer, 205,] prepares to send the next locally generated graphic overlay upon instruction from the originating studio.</p>	<p>Page 27 lines 7-9 and</p> <p>Page 451 line 22 to Page 452 line 5.</p>	<p>transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p> <p>Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.</p> <p>Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program</p>

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		<p>originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...</p>	
	generate several graphic video overlays, ...		Page 451 lines 7-11.
	and to transmit these overlays to TV set, 202,		Page 26 lines 4-8.
	upon command.		Page 44 lines 14-17.
			Page 26 lines 20-28.
said receiver station	Column 19 lines 63-64.	This signal is identified by decoder, 203,	Page 26 lines 1-2.

Said signal is identified by decoder, 203;

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having an input device,		and transferred via processor, 204, to microcomputer, 205.	Page 37 line 26 to page 38 line 8.
a processor for transmitting information to a remote collection station, and	Column 18 lines 58-59.	Signal processor, 200, scans sequentially all channels.	Page 422 lines 23-25.
	Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.	Page 33 lines 18-20. Page 273 lines 4-6.
a computer for storing data and	Column 19 lines 35-41. See "one digital data channel" in Fig. 6C.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 273 lines 21-25. Page 449 lines 13-35. See "one digital data channel" in Fig. 7C.
		transferred to microcomputer, 205; and ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. At the station of Fig. 7 and 7C, signal processor, 200, scans sequentially all channels at its switch, 1, mixer, 3, and decoder, 30, in the fashion of example #5. Controller, 20, has capacity for controlling the operation of all elements of the signal processor ... The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. ... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer. Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the	

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controlling presentations, said method comprising the steps of:	Column 19 line 64 to column 20 line 2.	preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.	<p>... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p>
	Column 19 lines 31-34.	<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p> <p>FIG 6C can also illustrate how programing delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.</p>	

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			<p>presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.</p> <p>Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that</p>
		page 450 line 27 to page 451 line 11.	
		Page 27 lines 7-9 and Page 451 line 22 to Page 452 line 5.	
	Column 20 lines 5-7.	... and [microcomputer, 205,] prepares to send the next locally generated graphic overlay upon instruction from the originating studio.	

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				<p>analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.</p>
selecting a media program from	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 268 line 28 to page 269 line 12 from example #5.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor</p>

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a plurality of media	Column 6 lines 23-30.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	Page 29 lines 4-15.
on the basis of a subscriber program;	Column 9 lines 47-57.	The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.	Page 248 line 17 to page 249 line 5.
		information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)	
		Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	
		Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.	
		Said detection-complete information causes	Page 257 line 24 to

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			<p>controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator,</p>
		<p>page 258 line 19.</p>	
	<p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>Page 257 line 24 to page 258 line 19.</p>	
		<p>Page 265 line 27 to Page 266 line 21.</p>	

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outputting said selected media program from said step of selecting a media at said receiver station;					6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ... After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.
	This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.		Page 250 lines 13-17.		Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command.
			Page 251 lines 8-11.		Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...
			Page 263 lines 19-24.		... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.
			Page 37 lines 26-28.		In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.
outputting said selected media program from said step of selecting a media at said receiver station;	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer,	Column 19 lines 20-25.	Page 436 line 9 to page 437 line 6.		Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned

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		<p>205, may instruct tuner, 214, to switch box, 201, to channel X ...</p>		<p>determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p>
			Page 439 lines 9-15.	
			Page 295 lines 6-8.	
			Page 439 lines 9-15.	

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inputting a command at said input device	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...
	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		generate several graphic video overlays, ...	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
		and to transmit these overlays to TV set, 202,	Page 451 lines 7-11.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
			Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.

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in response to a command communicated		upon command.	Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.
	Column 19 lines 60-65.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...	Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchronizing command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchronizing command ...
			Page 25 line 33 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.

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in said selected media program;		Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 26 line 4. Page 21 lines 23-24.	Said signal instructs microcomputer, 205, instruction signals embedded in the "Wall Street Week" programming transmission.
receiving at said receiver station a control signal		Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.") A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchronizing command." Said initial signal word or words that preceded the
				Page 44 lines 14-17.	
				Page 26 lines 20-28.	

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from an external source;		Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.	Page 420 lines 21-29.	above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.) Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions. The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.
controlling a presentation of a		Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
unit of said selected media at a peripheral device to said computer in		Column 4 lines 9-12.	... that they can convey signals to equipment that must switch manners or modes of operation during transmissions of individual units of programing, ...	Page 451 line 3. Page 13 lines 28-31.	And the Fig. 1C combining is displayed. They occur at precise times in programming and can synchronize the operation of receiver station apparatus to the timing of programming transmissions.
accordance with said control signal		Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital

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based on said step of inputting; and		generate several graphic video overlays, ...	Page 451 lines 7-11.	signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
		and to transmit these overlays to TV set, 202,	Page 26 lines 4-8.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
		upon command.	Page 44 lines 14-17.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
			Page 26 lines 20-28.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command ...
	Column 19 lines 63-66.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the

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		microcomputer, 205, to transmit the first overlay to TV set, 202,		Page 37 line 26 to page 38 line 8.	system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...
communicating from said receiver station to said transmitter station data that represents a record of said selected media or	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14.	Page 435 lines 16-18. Page 267 lines 20-28 from example #5.		In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)

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said control signal.	Column 17 lines 12-17.	Signal divider, 139, monitors the use of signals rather than the use of programming. Every instruction or information signal transmitted from processor, 140, to microcomputer, 142, is also transmitted to signal processor, 130, to be handled, recorded, and transmitted to a remote site with all other monitor information.	Page 268 line 28 to page 269 line 12 from example #5.
			Page 315 line 25 to page 316 line 6.
In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14 , via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)		In Fig. 5, decoder, 203, which is part of the signal processor system of the station of Fig. 5, not only monitors the operation of its associated apparatus, microcomputer, 205, but also controls said apparatus, in the fashions described above, in the execution of SPAM controlled functions. Decoder, 203, has means for detecting SPAM information in any programming transmission inputted to its associated apparatus, microcomputer, 205, and not only for detecting and transferring to said onboard controller, 14, via said bus means, the meter-monitor information of said every unencrypted SPAM message of said transmissions but also for inputting selected detected information to microcomputer, 205, and for controlling microcomputer, 205, in selected fashions. (Fig. 5 also shows that decoder, 203, has capacity for inputting detected information to signal processor, 200,	

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			and for receiving from and transferring control information to signal processor, 200.)	
			For example, in the case of the "Wall Street Week" program, transmitting the first and second SPAM messages of example #3	
			In examples #3, ..., the transmission of SPAM signal information causes signal processor, 200, to transfer signal record information by telephone to remote station....	

45. The method of claim 44 further comprising the step of: programming said receiver station	Column 19 lines 42-44.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 20-24.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
by inputting a portion of said control signal to said computer to	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")

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<p>respond to one of said commands.</p>	<p>Column 19 line 60 to column 20 line 1.</p>	<p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	<p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p>
	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p>	<p>Page 25 line 34 to page 26 line 2.</p>	<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205;</p>
		<p>Page 37 line 26 to page 38 line 8.</p>	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber</p>

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		station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	
		Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...	Page 26 lines 4-11.
		Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.	Page 27 lines 7-9 and
Column 20 lines 5-7.	<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p> <p>... and [microcomputer, 205,] prepares to send the next locally generated graphic overlay upon instruction from the originating studio.</p>	<p>Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent</p>	Page 451 line 22 to Page 452 line 5.

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				<p>overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.</p>
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46. A method of delivering informative materials by communicating said informative materials	Column 20 lines 33-36.	... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	<p>Page 476 line 34 to page 477 line 8.</p> <p>Page 477 lines 8-17.</p>	<p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected ALL signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....</p> <p>For example, a subscriber might instruct video recorder/player, 217, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.</p>
on a communication network having	Column 16 lines 32-35.	For example, a person might instruct video cassette recorder, 135, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.	Page 319 lines 30-33.	<p>For example, a subscriber might instruct video recorder/player, 217, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.</p>

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a transmitter station and	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 8-24.
a receiver station, said receiver station having	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.
a user input device,	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 396 lines 8-10.
a processor and	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 471 line 35 to page 472 line 1.
a storage device, said method comprising the steps of:	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion ...	Page 472 lines 15-17.
		Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs ...	Page 30 lines 7-9.
		The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...	Page 36 line 32 to page 37 line 3.
		Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.	
		Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.	
		At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...	
		... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...	
		Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.	
		Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs ...	

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receiving an input from a user at said user input device;	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 471 line 35 to page 472 line 1.
processing said input from said step of receiving an input at said receiver station to	Column 20 lines 31-36.	This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	Page 471 line 26 to page 472 line 17.
		<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV 567# information exists at said last-local-input-memory ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV 567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal</p>	<p>Page 476 line 34 to page 477 line 8.</p> <p>Page 477 lines 8-17.</p>

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enable said receiver station to receive said informative materials;	Column 20 lines 42-46.	<p>Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.</p> <p>Page 472 lines 23-27.</p> <p>Page 473 line 29 to page 474 line 1.</p>	<p>processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p> <p>... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p>
receiving said informative materials from said communication network in response to reception of said informative material enabled in said step of processing; and	Column 20 lines 46-49.	<p>When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.</p> <p>Page 473 lines 3-13.</p> <p>Page 477 lines 12-17.</p>	<p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe-... instructions ...</p> <p>... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....</p>

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			Page 477 lines 23-29. Page 478 lines 1-5. Page 475 lines 1-2.	... causes ... said decoder, 290, to detect and process properly the information of said second message. (Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.) Receiving said output information causes printer, 221, to print the information of said specific recipe and list.
displaying said informative material from said step of receiving informative materials at said receiver station.	Column 20 lines 48-49.	... and thence to printer, 221, for printing.	Page 475 lines 1-2.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.

47. The method of claim 46 comprising the further steps of: creating a record on said receiver station storage device of the reception of said informative material; and	Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.	Page 472 lines 23-27. Page 473 line 29 to page 474 line 1.	... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information. Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
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reporting said record of said reception of said informative material from said step of creating a record from said receiver station to said transmitter station.	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	Page 28 lines 25-35.
		that site can determine for billing purposes that the recipe was,	Page 44 lines 26-30.
			Page 471 lines 26-31.
			Page 473 lines 3-8.
		first, ordered	Page 472 lines 23-27 with
			<p>[Signal processor in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information, ...</p> <p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...</p> <p>Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information</p>

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		and, second, delivered.	<p>Page 471 lines 14-16.</p> <p>Page 473 line 29 to Page 474 line 1.</p>	<p>and TV567# information.</p> <p>Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe-... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p>
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48. The method of claim 46 wherein enabling said informative material comprises decrypting.	Column 20 lines 46-49.	<p>When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.</p>	<p>Page 473 lines 3-13.</p> <p>Page 477 lines 12-17.</p> <p>Page 477 lines 23-29.</p> <p>Page 478 lines 1-5.</p>	<p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe... instructions ...</p> <p>... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....</p> <p>... causes ... said decoder, 290, to detect and process properly the information of said second message.</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example</p>
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			#4.)	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.
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49. The method of claim 46 wherein display of said informative material in said step of displaying is a print out on a printer at said receiver station.	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 473 lines 3-13.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe ... instructions selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission.... ... causes ... said decoder, 290, to detect and process properly the information of said second message. (Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.) Receiving said output information causes printer, 221, to print the information of said specific recipe and list.
			Page 477 lines 12-17.	
			Page 477 lines 23-29.	
			Page 478 lines 1-5.	
			Page 475 lines 1-2.	

50. A method for delivery of informative materials	Column 20 lines 33-36.	... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded	Page 476 line 34 to page 477 line 8.	(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is
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			digital form ...		entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.
				Page 477 lines 8-17.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....
in a communications network having	Column 16 lines 32-35.	For example, a person might instruct video cassette recorder, 135, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.		Page 319 lines 30-33.	For example, a subscriber might instruct video recorder/player, 217, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.
a transmitter station and	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.		Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
a plurality of receiver stations, each said of receiver stations having	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio		Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of

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	receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.	
	Column 3 lines 48-51.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.	Page 396 lines 8-10.
a display,	Column 20 lines 16-19.	It is the further purpose of this invention to provide means and methods for the automation of ultimate receiver stations, ... Such ultimate receiver stations may be private homes or offices or commercial establishments such as theaters, hotels, or brokerage offices.	Page 12 lines 30-35.
		... transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."	Page 470 lines 1-3 and
		At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is	Page 470 lines 9-12.
		...	
		... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.	Page 470 lines 19-21.
a processor and	Column 20 lines 31-33.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...	Page 472 lines 15-17.
a storage device, said method comprising the steps of:	Column 7 lines 36-37.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received	Page 30 lines 7-9.

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					information in a predetermined fashion.
receiving at each of said plurality of receiver stations from said communication network a television program;				Page 36 line 32 to page 37 line 3.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs
	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.		Page 470 lines 1-3 and Page 470 lines 9-12.	... transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.		Page 470 lines 19-21.	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
receiving at each of said plurality of receiver stations from said communication network said informative materials;	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...		Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
decoding said informative materials at each of said plurality of receiver stations;	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...		Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
storing said informative materials from said step	Column 20 lines 29-30.	... which is also transferred by processor, 204, to buffer/comparator, 8, of signal		Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
				Page 472 lines 4-12.	... Automatically, the controller, 39, of decoder, 145, ... transfers said message to

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of decoding at said storage device of each of said receiver stations;		processor, 200.	<p>Page 37 line 26 to page 38 line 8.</p> <p>... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p>
recording use of said informative materials at each of said plurality of receiver stations; and	Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.	<p>Page 472 lines 23-27.</p> <p>Page 473 line 29 to page 474 line 1.</p>
reporting the record of use of said informative materials from said step of recording from each of said plurality of receiver stations to said transmitter station.	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	<p>Page 28 lines 25-35.</p> <p>[Signal processor in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption</p>

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					and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
	that site can determine for billing purposes that the recipe was,			Page 44 lines 26-30.	... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...
				Page 471 lines 26-31.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,...
				Page 473 lines 3-8.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...
	first, ordered			Page 472 lines 23-27 with	Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
				Page 471 lines 14-16.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...
	and, second, delivered.			Page 473 line 29 to Page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer to the particular meter-monitor information to the buffer/comparator, 14, of signal processor,

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				200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
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51. The system of claim 50 comprising the further steps of; buffering the records of use of said informative materials at each of said plurality of receiver stations at said storage device in each of said plurality of receiver stations;	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 31 line 30 to page 32 line 6.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...
autodialling a modem from each of said plurality of receiver stations to a transmitter station in response to said buffer in said each of said storage device reaching a predetermined amount.	Column 9 lines 8-13.	Digital recorder, 16, can tell the controller, 20, when it reaches predetermined levels of fullness to permit the controller, 20, to instruct auto dialer, 24, to contact an appropriate remote site allowing the recorder, 16, to output its data making memory available.	Page 33 lines 4-6. Page 272 line 26 to page 273 line 8.	Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness. In each example, ... recorder, 16, measures the quantity of its recording capacity that holds signal records, in a predetermined fashion, and determines that said quantity is equal to or greater than said particular fullness information. Said determining causes recorder, 16, to transfer a particular instruct-to- call instruction to controller, 20, that causes controller, 20, to activate telephone connection, 22, and proceed with a particular preprogrammed telephone signal record transfer sequence that is fully automatic. The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number.

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			Page 275 line 33 to page 276 line 2.	Automatically said second computer responds with a particular transmission complete signal that causes controller, 20, to terminate said telephone call then to cause recorder, 16, to erase from memory all said meter charge information.
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52. The system of claim 50 wherein said informative materials are encoded a television signal.	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
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53. The system of claim 50 wherein said informative materials are encoded on a carrier wave.	Column 3 lines 6-8. Column 6 lines 45-48.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. The television channel signal is then transmitted to a standard amplitude demodulator, 32, which uses standard demodulator techniques well known in the art to define the television base band signal.	Page 14 line 35 to page 15 line 2. Page 34 lines 31-35.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. The television channel signal then passes to a standard amplitude demodulator, 32, which uses standard demodulator techniques, well known in the art, to define the television base band signal.
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54. A method of controlling a remote transmitter station to	Column 11 lines 39-43.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 328 lines 9-13.	... said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
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communicate program material	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 326 lines 28-30. Page 328 line 22 to page 329 line 1.
to a remote receiver station and	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.
controlling said remote receiver station to	Column 20 lines 27-33.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator,	Page 471 line 26 to page 472 line 17.
... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons. Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.		Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that	

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			<p>fashion, and determines that said quantity is equal to or greater than said particular fullness information. Said determining causes recorder, 16, to transfer a particular instruct-to-call instruction to controller, 20, that causes controller, 20, to activate telephone connection, 22, and proceed with a particular preprogrammed telephone signal record transfer sequence that is fully automatic.</p> <p>The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number.</p> <p>Automatically said second computer responds with a particular transmission complete signal that causes controller, 20, to terminate said telephone call then to cause recorder, 16, to erase from memory all said meter charge information.</p>
(1) receiving a unit of programming to be transmitted at a remote transmitter station,	Column 11 lines 50-54.	Page 275 line 33 to page 276 line 2.	<p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine ... that said "code" information matches ... schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87.</p>
	Column 11 lines 21-24.	Page 326 lines 30-33.	<p>Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ...</p>

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and said transmitter station transferring said unit of programming to a transmitter;	Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 31 to page 329 line 1.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
(2) receiving one or more instruct signals	Column 11 lines 50-54.	For example, if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, ...	Page 328 lines 22-31.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine ... that said "code" information matches ... schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87.
	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.
	Column 20 lines 27-33.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, ...	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for- entered-information-and-process instructions,

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	<p>Column 20 lines 37-42.</p> <p>The signal transmission from processor, 204, also passes a signal word to signal processor, 200,</p> <p>which, in a predetermined fashion, signal processor, 200, decrypts and transfers</p>	<p>Page 477 lines 8-23.</p> <p>Page 281 lines 1-6.</p> <p>Page 282 line 2 to page 283 line 33.</p>
		<p>and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause ...</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...</p> <p>By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")</p> <p>... the information of said segments is encrypted prior to transmission ... The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ... Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that</p>

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and a code or datum at said remote transmitter station,		to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.	Page 478 lines 1-5.
	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.
	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.
	Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 32 to page 15 line 2.
said one or more instruct signals operate at the remote receiver station to control a receiver station apparatus and	Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 31 lines 14-18.
	Column 20 lines 31-36.	This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate	Page 471 line 26 to page 472 line 17.
		is "100110" ... and modify the information at said location to be "111111".	
		(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)	
		The present invention employs signals embedded in programming.	
		(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	
		The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	
		If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.	
		Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...	

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		channel to receive the recipe in encoded digital form ...	<p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p>	<p>Page 476 line 34 to page 477 line 8.</p> <p>Page 477 lines 8-17.</p>

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direct said receiver station to communicate said code or datum to a remote data collection site,	Column 7 lines 50-60.	the incoming encrypted recipe.	Page 31 lines 10-22.
		Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Buffer/comparator, 14, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.
	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...
	Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records

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<p>said transmitter station transferring said one or more instruct signal to said transmitter;</p>	Column 8 lines 46-50.	<p>The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.</p>	<p>to a digital recorder, 16, ...</p> <p>Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...</p> <p>The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.</p> <p>... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.</p>
	Column 11 lines 54-57.	<p>... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	The present invention employs signals embedded in programming.
(3) receiving one or more control signals at said remote transmitter station,	Column 11 lines 39-41.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, with information of the programming schedule, received earlier from input, 74, and/or network, 98, ...
said control signals	Column 11 lines 39-43.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, can determine controller/computer, 73, can determine when and on what channel or channels the	... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.
			... said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the

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control the communication of	Column 11 lines 50-57.	head end facility should transmit the programming.	Page 326 lines 28-30.
	Column 20 lines 16-19.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.
said unit of programming and		Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Page 470 lines 1-3 and Page 470 lines 9-12.
			Page 470 lines 19-21.
		station of Fig. 6 should transmit the programming of each received program unit. ... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. ...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is to display the television information of said transmission (that is, information of said audio	

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said one or more instruct signals between said remote intermediate transmitter station and said remote receiver station; and	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ... Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming ...	Page 471 line 35 to page 472 line 1. Page 337 lines 3-10.	and video) at monitor, 202M. At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ... In field distribution system, 93, amplifier, 94, inputs ... all programming transmitted by the cable television system head end station...
(4) transmitting from said remote transmitter station an information transmission comprising said first unit of programming, said one or more instruct signals and	Column 12 lines 45-47. Column 20 lines 16-19.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ... Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Page 337 lines 1-8. Page 470 lines 1-3 and Page 470 lines 9-12. Page 470 lines 19-21.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96,transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
	Column 20 lines 27-29.	... a signal is identified in the incoming	Page 471 line 35 to	At the station of Figs. 7 and 7F, said

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said code or datum		Column 2 lines 63-66.	programming on TV set, 202, by decoder, 203, ... (The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ...	page 472 line 1. Page 14 lines 27-29.	message is detected at TV signal decoder, 145, ... (The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ...
		Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 32 to page 15 line 2.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
	in response to said one or more control signals at said remote intermediate transmitter station.	Column 11 lines 39-43.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 328 lines 9-13. Page 326 lines 28-30.	... said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. ... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.
55. The method of claim 54, wherein said one or more control signals comprise a second code or datum which		Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ...
		Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.

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operates at said remote transmitter station to	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
identify said unit of programming, said method further comprising the step of:	Column 11 lines 21-24.	Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ...	Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ...
receiving a schedule which operates at said remote transmitter station to identify a	Column 11 lines 39-41.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, ...	Page 28 lines 26-27. Page 49 lines 26-27. Page 326 lines 30-33.	Meter-monitor segments contain meter information and/or monitor information. Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.
			Page 328 lines 9-10.	... with information of the programming schedule, received earlier from input, 74, and/or network, 98, ...

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specific transmission time for said unit of programming.	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	<p>Page 326 lines 28-30.</p> <p>Page 326 line 33 to page 327 line 2.</p>
		... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...

56. The method of claim 54, wherein said remote program transmission station transmits said one or more control signals to said receiver station and	Column 11 lines 50-57.	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87,</p> <p>controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 328 line 22 to page 329 line 1.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
	<p>Column 4 lines 5-6.</p> <p><i>In General</i> Column 17 lines 39- 44.</p>	<p>These techniques employ signals embedded in programs.</p> <p>Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions, identify and discriminate among one or more pieces of external</p>	<p>Page 13 lines 25-26.</p> <p><i>In General</i> Page 15 lines 16-23.</p> <p>The present invention employs signals embedded in programming.</p> <p>The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming</p>

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		equipment to which such signals are addressed , and transfer such signals to such equipment as directed .	<p>transmissions and convert the encoded signals to digital information; ...</p> <p>... identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus ...</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ...</p> <p>Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205.</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p>
	<p>equipment to which such signals are addressed, and transfer such signals to such equipment as directed.</p> <p>This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p> <p>By comparing identification signals on the incoming programming ...</p>	<p>Page 34 lines 24-26.</p> <p>Page 44 lines 14-15.</p> <p>Page 95 lines 18-21.</p> <p><i>Specifically</i> Page 26 lines 1-2.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 327 line 35 to page 328 line 13.</p>	
<p>said code or datum which operates at said remote transmitter station to identify said unit of programming, said method further comprising the step of:</p>	<p><i>Specifically</i> Column 19 lines 63-64.</p> <p>Column 11 lines 38-39.</p>		

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		By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	
		SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...	Page 84 lines 26-28.
		... monitor information that identifies what programming is available, ...	Page 28 lines 26-27.
		Meter-monitor segments contain meter information and/or monitor information.	Page 49 lines 26-27.
		Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.	Page 315 lines 20-24.
		Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.	Page 44 lines 26-32.
	Column 15 lines 57-60. The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each.	Meter-monitor segments contain meter information and/or monitor information.	Page 49 line 26 to

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				page 50 line 20.	Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data.
receiving a schedule which	Column 11 lines 39-41.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, ...		Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
operates at said remote transmitter station to	Column 11 lines 21-22.	Such input information might include the cable television system's complete programming schedule, ...		Page 328 lines 9-10.	... with information of the programming schedule, received earlier from input, 74, and/or network, 98, ...
identify a specific transmission time for said unit of programming.	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.		Page 326 lines 28-30.	... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.
				Page 326 lines 30-31.	Such input information can include the complete programming schedule of the station of Fig. 6, ...
				Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...

57. The method of claim 54, wherein said remote transmitter station communicates a plurality of units of mass medium programming according to a schedule and a	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.		Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule
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<p>specific one of said one or more control signals is effective at the remote transmitter station to communicate a specific one of said plurality of units of mass medium programming to a plurality of transmitters.</p>	Column 11 lines 28-31.	<p>Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.</p>	<p>Page 84 lines 26-28.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,....</p>	<p>received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
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58. A method of controlling a remote intermediate mass medium programming transmitter station to communicate mass medium program material to	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	<p>Page 59 lines 29-33.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p>	<p>At this point, an instruction signal is generated at said program originating studio, embedded</p>
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one or more receiver stations,	Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. FIGS. 3A, 3B, and 3C illustrate the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.
	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 324 lines 18-21. Page 390 lines 30-35.
with said remote transmitter station including a broadcast or cablecast	Column 10 lines 15-20.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	Page 396 lines 8-10. Page 324 lines 8-17.
			in the programming transmission, and transmitted. The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ... Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming. Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons. Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples. The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio,

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transmitter	Column 10 lines 43-47.	... and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 325 lines 1-4.
for transmitting one or more units of mass medium programming,	Column 11 lines 21-24.	Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ...	Page 326 lines 30-33.
a plurality of selective transfer devices each operatively connected to said broadcast or cablecast transmitter	Column 12 lines 57-61.	This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 339 lines 9-26.
for communicating a unit of mass medium programming,	Column 10 lines 41-43.	... by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, ...	Page 324 line 34-35.
	Column 11 lines 21-24.	Such input information might include the cable television system's complete programming schedule, with each discrete	Page 326 lines 30-33.
		print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. ... apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92. Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information. So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of	

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	Column 12 lines 57-61.	unit of programming identified with a unique program code ... This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 339 lines 9-26. So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...
a mass medium programming receiver,	Column 10 lines 30-39.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.	Page 324 lines 23-31. The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.
a control signal detector, and	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...	Page 325 line 34 to page 326 line 7. At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....

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a controller or computer capable of controlling	Column 11 lines 15-17.	Cable program controller and computer, 73, is the central automatic control unit for the transmission facility.	Page 59 lines 29-33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
one or more of said selective transfer devices, and with said remote transmitter station adapted to	Column 11 lines 44-46.	Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Page 326 lines 19-20. Page 328 lines 14-16.	Cable program controller and computer, 73, is the central automatic control unit for the transmission station. Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78,
detect the presence of one or more control signals,	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;...
			Page 59 lines 29-33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate

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to control the communication of specific units of mass medium programming	Column 8 lines 58-59.	detector devices. Control signals can be passed to the apparatus by means of the programming transmissions ...		Page 59 lines 29-33.	detector devices. A SPAM message is the modality whereby the original transange station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 11 lines 57-64.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...		Page 329 line 2-20.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
	Column 11 lines 38-46.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the		Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has
in response to detected specific control signals, and					

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<p>to deliver at its broadcast or cablecast transmitter one or more units of mass medium programming, said method of communicating comprising the steps of:</p>	<p>Column 11 lines 30-31.</p>	<p>programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.</p>	<p>been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
			<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p>
			<p>... monitor information that identifies what programming is available, ...</p>
			<p>Meter-monitor segments contain meter information and/or monitor information.</p>
			<p>Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...</p>
	<p>Column 10 lines 49-52.</p>	<p>... transmit each program unit to cable field distribution system, 93.</p>	<p>... each program unit, ... the station should transmit the unit, ...</p>
		<p>When played on video recorder and players, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted</p>	<p>... transmit the programming of each received program unit.</p>
			<p>When played on video recorders, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted via switch 75 to field distribution</p>

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receiving a unit of mass medium programming	<p>Column 19 lines 60-62.</p> <p>Column 11 lines 21-24.</p> <p>Column 20 lines 19-23.</p> <p>Column 11 lines 28-31.</p>	<p>to the field.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming ...</p> <p>Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ...</p> <p>Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."</p> <p>Such input information might also indicate when and on which channel or channels the</p>	<p>system, 93.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, ...</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.</p> <p>Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.</p> <p>Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#".</p> <p>Such input information can indicate when and how the station should expect to receive each</p>
to be transmitted by the remote intermediate			<p>Page 59 lines 29-33.</p> <p>Page 25 lines 34-35.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 326 lines 30-33.</p> <p>Page 471 lines 6-13.</p> <p>Page 326 line 33 to page 327 line 2.</p>

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<p>mass medium programming transmitter station and delivering said unit of mass medium programming to a transmitter,</p>	<p>Column 19 lines 60-63.</p>	<p>head end facility should transmit each program unit to cable field distribution system, 93.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.</p>	<p>program unit, when and on which channel or channels and how the station should transmit the unit, ...</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p>
<p>said unit of mass medium programming having an instruct signal which is effective to control a receiver station apparatus and</p>	<p>Column 20 lines 27-36.</p>	<p>Five minutes later,</p> <p>a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.</p> <p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal</p>	<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200.</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-</p>

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	generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause an instance of ... (An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.	Page 476 line 34 to page 477 line 8.
		In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...	Page 477 lines 8-17.
a code or datum to serve as	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.
	Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a	Page 14 line 32 to page 15 line 2.

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evidence of the passing of said instruct signal to a controllable device or	Column 7 lines 50-60.	transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.
	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...
	Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records

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at the remote intermediate mass medium programming transmitter station operate to control the communication of said unit of mass medium programming; and	Column 11 lines 38-46.	At this point, an instruction signal is generated at said program originating studio, ... The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ...	Page 25 lines 34-35. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 327 line 35 to page 328 line 13. Page 84 lines 26-28. Page 28 lines 26-27.
	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.		

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		Meter-monitor segments contain meter information and/or monitor information.	Page 49 lines 26-27.
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 lines 14-16. Page 328 line 22 to page 329 line 1.
		Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ... For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.	
transmitting said one or more control signals to said transmitter	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.
		A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.	Page 25 line 34 to page 26 line 1.
		The second message is of the information	

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		associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...	Page 90 lines 4-7. Applicants teach this as the composition signal of instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.
Column 11 lines 38-39. By comparing identification signals on the incoming programming ...		Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	Page 327 line 35 to page 328 line 13.
		SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information.	Page 84 lines 26-28. Page 28 lines 26-27. Page 49 lines 26-27.

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before a specific time.	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...
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59. The method of claim 58, wherein said one or more control signals comprise a second code or datum which operates at the remote intermediate mass medium programming transmitter station to	Column 2 lines 63-66. Column 3 lines 6-8. Column 7 lines 36-37.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ... Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion ...	Page 14 lines 27-29. Page 14 line 35 to page 15 line 2. Page 30 lines 7-9. Page 36 line 32 to page 37 line 3. Page 327 line 35 to page 328 line 13.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ... Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion. Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with
identify said unit of mass medium programming, said method further comprising the step of:	Column 11 lines 38-39.	By comparing identification signals on the incoming programming with the programming schedule ...		

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					information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information.
transmitting a schedule which				Page 84 lines 26-28. Page 28 lines 26-27. Page 49 lines 26-27.	
operates at the remote intermediate mass medium programming transmitter station to		Column 11 lines 39-41. Column 11 lines 38-43.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, ... By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 328 lines 9-10. Page 326 lines 28-30. Page 327 line 35 to page 328 line 13.	... with information of the programming schedule, received earlier from input, 74, and/or network, 98; receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or

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communicate said unit of mass medium programming to a transmitter at said specific time.	Column 11 lines 50-57.	network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.	Page 84 lines 26-28. Page 28 lines 26-27. Page 49 lines 26-27. Page 328 line 22 to page 329 line 1.

60.	The method of	Column 11 lines 28-31.	Such input information might also indicate	Page 326 line 33 to	Such input information can indicate when and
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claim 58, wherein said specific time is a scheduled time of transmitting said unit of mass medium programming at said remote intermediate mass medium programming transmitter station and said one or more control signals are effective at the remote intermediate mass medium programming transmitter station to	Column 11 lines 38-43.	when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93. By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	page 327 line 2. Page 327 line 35 to page 328 line 13. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information.

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control one or more of said plurality of selective transferred devices at different times.	Column 11 lines 57-65.	Page 329 line 2-22.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.
	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 332 lines 24-30.	... causes computer, 73, ... to cause switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record ... unit D.
	Column 11 lines 66 to Column 12 line 8.	Page 333 lines 15-21.	Computer, 73, causes ... switch, 75, to configure its switches so as to transfer the output of recorder, 78, to the input of recorder, 76. Computer, 73, causes recorder, 78, to play and recorder, 76, to record for the duration of

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	If controller/ computer, 73, determines at any time that it is necessary	program unit Y. Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. ... Caused to organize the locations of said units to play according to said schedule, computer 73, ...	Page 331 lines 17-33.
	to reorganize the order in which programming units are stored on either recorder/player or on both,	Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D—are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first.	Page 331 lines 16-25.
		In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder because unit D is scheduled to play on the same channel immediately after Y.	Page 334 lines 1-6.
		<i>See generally.</i>	Page 331 line 17 to page 334 line 6
	controller/computer, 73, can use techniques for reorganizing files stored on multidisk units, which techniques are well known to computer operators, and order the execution of such techniques by passing appropriate instructions to of matrix switch, 75, and recorder/ players, 76 and 78.	Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D—are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first.	For example, page 331 lines 17-33.

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		<p>W, and D--are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first. According to the schedule recorded at computer, 73, Q should play first on the cable channel modulated by cable channel modulator, 83; then subsequently Y and W should start to play simultaneously on the channels modulated by modulators, 83 and 87 respectively; then D should play on the channel modulated by modulator, 83, immediately after Y ends. Caused to organize the locations of said units to play according to said schedule, computer 73, ...</p> <p>Determining said located space to be available causes computer, 73, to cause recorder, 76, to move forward or rewind to the start of program unit D; to cause recorder, 78, to rewind to the start of said located space; and to cause switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record for the duration of program unit D. ...</p> <p>Computer, 73, causes recorder, 78, to move forward or rewind to the start of program unit Y; causes recorder, 76, to rewind to the start of the available space; and causes switch, 75, to configure its switches so as to transfer the output of recorder, 78, to the input of recorder, 76. Computer, 73, causes recorder, 78, to play and recorder, 76, to record for the duration of program unit Y. ...</p> <p>In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D</p>
	<p>For example, page 332 lines 23-31.</p> <p>For example, page 333 lines 15-21.</p> <p>For example, page 334 lines 1-6.</p>	

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				to be located in sequence on the same recorder because unit D is scheduled to play on the same channel immediately after Y.
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61. A method of processing signals	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...
at a receiver station having	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 37 line 26 to page 38 line 8. Page 390 lines 30-35.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
a computer and	Column 19 lines 42-44.	Microcomputer, 205, is preprogramed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	Page 396 lines 8-10.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons. Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
a output device to	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 21 lines 20-24. Page 445 line 24 to page 446 line 1.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission. ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor,

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deliver at the output device a combined or	Column 19 line 64 to column 20 line 1.		202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
			In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
			Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...
			In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		Page 446 lines 17-21.	
		Page 26 lines 1-2.	
		Page 37 lines 26 to page 38 line 8.	
		Page 26 lines 4-11.	
			Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and

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<p>sequential presentation of a program and a user specific output, with said computer having a storage device for storing user data and</p>	<p>said output outputting mass medium programming and other information, said method comprising the steps of:</p>	Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	Page 451 line 3.	transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance
		Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 25 lines 33-34. Page 449 lines 13-20.	And the Fig. 1C combining is displayed. Then the host says, "And here is what your portfolio did." Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
<p>said output outputting mass medium programming and other information, said method comprising the steps of:</p>	<p>said output outputting mass medium programming and other information, said method comprising the steps of:</p>	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
		Column 18 lines 45-47.	In this example, microprocessor, 205, is programmed to hold a portfolio of stocks ...	Page 451 line 3. Page 420 lines 3-4.	And the Fig. 1C combining is displayed. The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks ...

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transferring said mass medium programming to said output device and	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
	Column 19 lines 56-59.	The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ... For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.
	detecting in said information transmission an instruct signal which is effective to	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first	Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...

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control a receiver station apparatus and	Column 6 lines 48-50.	overlay to TV set, 202, ...	Page 37 line 26 to page 38 line 8.
	<i>In General</i> Column 17 lines 39- 44.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 26 lines 4-8.
		Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed, and transfer such signals to such equipment as directed.	Page 34 line 35 to page 35 line 1. <i>In General</i> Page 15 lines 16-23.
			Page 34 lines 24-26.
			<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>This base band signal is then transferred through separate paths to three separate detector devices.</p> <p>The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...</p> <p>... identifies the particular apparatus to which said signals are addressed, and outputs said</p>

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a code or datum to serve as evidence of the passing of said instruct signal to a controllable device or	Specifically Column 19 lines 63-64. Column 2 lines 63-66. Column 3 lines 3-8.	Page 44 lines 14-15. Page 95 lines 18-21. Specifically Page 26 lines 1-2. Page 37 line 26 to page 38 line 8. Page 14 lines 27-29. Page 14 line 32 to page 15 line 2.	signals to said apparatus ... A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ... Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. (The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ... The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. (The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ... The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.		Said signal is identified by decoder, 203;
	This signal is identified by decoder, 203.	Page 26 lines 1-2.	METE 065, Appendix A, Page 270 of 1304

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of the functioning of said controllable apparatus in response to said instruct signal; and			transferred to microcomputer, 205; and ...
	and transferred via processor, 204, to microcomputer, 205.	Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	Column 19 lines 63-64.	Page 26 lines 1-2. Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	Column 17 lines 12-17.	Page 315 line 25 to page 316 line 6.	In Fig. 5, decoder, 203, which is part of the signal processor system of the station of Fig. 5, not only monitors the operation of its associated apparatus, microcomputer, 205, but also controls said apparatus, in the fashions described above, in the execution of SPAM controlled functions. Decoder, 203, has means for detecting SPAM information in any programming transmission inputted to its associated apparatus, microcomputer, 205, and not only for detecting and transferring to said onboard controller, 14, via said bus means, the meter-monitor information of said every unencrypted SPAM message of said transmissions but also for inputting selected

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			<p>detected information to microcomputer, 205, and for controlling microcomputer, 205, in selected fashions. (Fig. 5 also shows that decoder, 203, has capacity for inputting detected information to signal processor, 200, and for receiving from and transferring control information to signal processor, 200.)</p> <p>For example, in the case of the "Wall Street Week" program, transmitting the first and second SPAM messages of example #3</p> <p>In examples #3, ..., the transmission of SPAM signal information causes signal processor, 200, to transfer signal record information by telephone to remote station....</p>	<p>Page 322 lines 19-21.</p> <p>Page 271 lines 33 to 35.</p>	<p>detected information to microcomputer, 205, and for controlling microcomputer, 205, in selected fashions. (Fig. 5 also shows that decoder, 203, has capacity for inputting detected information to signal processor, 200, and for receiving from and transferring control information to signal processor, 200.)</p> <p>For example, in the case of the "Wall Street Week" program, transmitting the first and second SPAM messages of example #3</p> <p>In examples #3, ..., the transmission of SPAM signal information causes signal processor, 200, to transfer signal record information by telephone to remote station....</p>
controlling said computer based on said detected instruct signal, said step of controlling comprising:	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	<p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...</p>	<p>Page 26 lines 4-10.</p>	<p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...</p>
(1) selecting	Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	<p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p>	<p>Page 26 lines 1-8.</p>	<p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p>
a specific portion of	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	<p>TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...</p>	<p>Page 26 lines 8-11.</p>	<p>TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...</p>

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said stored user data of interest;	Column 18 lines 45-47.	In this example, microprocessor, 205, is programmed to hold a portfolio of stocks ...	Page 420 lines 3-4.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks ...
(2) communicating said selected specific portion of said stored user data of interest to said output device; and subsequently	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
(3) ceasing to communicate said specific portion to said output device;	Column 20 lines 4-5.	... microcomputer, 205, ceases transmitting its own graphic to TV set, 202, ...	Page 27 lines 4-7.	... causes microcomputer, 205, to cease overlaying the graphic information onto the received composite video and to commence transmitting the received composite video transmission unmodified.
(4) delivering at said output device the combined or	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
sequential output of said received mass medium programming and said selected specific portion of	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
said stored user data of interest.	Column 19 lines 59-60. Column 18 lines 45-47.	Then the host says, "And here is what your portfolio did." In this example, microprocessor, 205, is programmed to hold a portfolio of stocks ...	Page 25 lines 33-34. Page 420 lines 3-4.	Then the host says, "And here is what your portfolio did." The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks ...

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62. The method of claim 61, further comprising any one of the steps of: programming said receiver station to process viewer data of interest and to	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
	Column 18 lines 46-48.	... microprocessor, 205, is programmed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.

62. The method of claim 61, further comprising any one of the steps of: programming said receiver station to process viewer data of interest and to	Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-35.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused
	Column 18 lines 46-48.	... microprocessor, 205, is programmed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.

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				in a predetermined fashion (for example, by a SPAM message a given transponder, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
respond to one or more instruct signals associated with some mass medium programming;	Column 19 lines 42-44.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 20-24.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
receiving	Column 19 lines 63-66.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber

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a command	Column 19 lines 48-53.	station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...	Language
	These signals instruct microcomputer, 205, to	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")	Page 23 line 35 to page 24 line 16.
	generate several graphic video overlays, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.	Page 451 lines 7-11.
	and to transmit these overlays to TV set, 202,	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.	Page 26 lines 4-8.
	upon command.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.	Page 44 lines 14-17.
		(Hereinafter, an instruction such as the above	Page 26 lines 20-28.

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<p>embedded in or</p> <p>associated with a signal that contains some mass medium programming;</p>	<p>Column 19 lines 43-44.</p> <p>Column 19 lines 60-65.</p>	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...</p>	<p>signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, ...</p>
storing a locally input	Column 19 lines 5-8.	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...</p>	<p>Page 21 lines 23-24.</p> <p>Page 25 line 33 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 26 line 4.</p>
		The program-unit-of-interest information	
		Page 428 lines 21-26.	
		In another example, microcomputer, 205	
		Column 19 lines 5-8.	

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command that designates or specifies one of:		may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast.	preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.
(1) a unit of mass medium programming to be outputted or stored;	Column 19 lines 23-29.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; instructions causes controller, 20, ... to switch power on to video recorder/player, 217, controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program. ... instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said
			Page 437 lines 1-6.
			Page 295 lines 6-8.
			Page 439 lines 9-15.
			Page 445 lines 24-27.
			Page 446 lines 18-23.
			Page 445 line 24 to page 446 line 1.

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(2) a fashion in which to present some mass medium programming or some computer output; and				Page 445 line 35 to page 446 line 1.	communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
				Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
		Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
			generate several graphic video overlays, ... and to transmit these overlays to TV set, 202,	Page 451 lines 7-11. Page 26 lines 4-8.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first. Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.

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			the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatusto cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert itsinstructions causes controller, 20, ...; to switch power on to video recorder/player, 217,controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program. ...instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instructions to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M,and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
		Page 439 lines 9-15.	
	instruct tuner, 214, to switch box, 201, to channel X	Page 295 lines 6-8.	
	and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week,"	Page 445 lines 24-27.	
	and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on	Page 446 lines 18-23.	
	and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1. Page 446 lines 17-21.	

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Claim Language	Reference	Language	Reference
controlling a processor or computer to process	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.
a viewer reaction to a unit of programming or	Column 20 lines 19-26.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further ...	Page 471 lines 6-25.
an image outputted at said output device, said step of controlling comprising the steps of:	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.
(1) assembling a record that includes additional data besides said viewer reaction;	Column 20 lines 42-45.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer	Page 472 lines 23-27.
		... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ... Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station. Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory. And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. ... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record	

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and	Column 9 line 68 to column 10 line 2.	...	Page 32 lines 20-21. Page 223 lines 22-33.
		The controller, 20, instructs buffer/comparator, 14, what signals to discard and how to mark signals and assemble signal strings.	
		...	
		contains particular program unit information and TV567# information.	
		Buffer/comparator, 14, operates under control of controller, 20, ...	
		Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter & monitor information (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing information from clock, 18.	
		When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion then discard all information of said record from its memory and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion.	
(2) transmitting said record to a remote data collection station;	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	Page 28 lines 25-35.
		[Signal processor in Fig.7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter	

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Claim Language	Reference	Language	Reference
		records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.	
	that site can determine for billing purposes that the recipe was,	... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...	Page 44 lines 26-30.
		Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,...	Page 471 lines 26-31.
		One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...	Page 473 lines 3-8.
	first, ordered	Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.	Page 472 lines 23-27 with
		Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...	Page 471 lines 14-16.
	and, second, delivered.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at	Page 473 line 29 to Page 474 line 1.

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	Column 9 lines 8-13.	Digital recorder, 16, can tell the controller, 20, when it reaches predetermined levels of fullness to permit the controller, 20, to instruct auto dialer, 24, to contact an appropriate remote site allowing the recorder, 16, to output its data making memory available.	<p>Page 33 lines 4-6.</p> <p>Page 272 line 26 to page 273 line 8.</p>
controlling a processor or computer to process	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,	<p>Page 275 line 33 to page 276 line 2.</p>
			<p>Page 472 lines 15-17.</p>
			<p>... and executing said instructions causes controller, 20, to determine that TV 567# information exists at said last-local-input-#</p>

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Claim Language	Reference	Language	Reference
a viewer reaction to a unit of programming or	Column 20 lines 19-26.	...	Page 471 lines 6-25.
an image outputted at said output device, said step of controlling comprising the steps of:	Column 19 lines 67 to column 20 line 2.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further ...	memory ... Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station. Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory. And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
(1) detecting a datum that identifies a unit of programming or an image outputted at	Column 18 lines 30-35.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic. TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder,

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		Page 414 lines 13-27	<p>203, and inputted to said controller, 39, in the above escribed fashion.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p> <p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p>
		Page 15 lines 16-22	
		Page 411 lines 10-15	
		Page 418 line 23 to page 419 line 15.	

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said output device; and	Column 16 lines 18-21.	TV signal decoder, 145, for TV set, 144 (which may receive programming inputs and associated signals generated or transferred by microcomputer, 142).	Page 322 line 26 - Page 323 line 11.
(2) transmitting said datum to a remote data collection station;	Column 18 lines 36-37.	... for recording and subsequent transmission to a remote data collection site.	Page 411 line 28 to page 412 line 2.
			<p>The programming of said "Wall Street Week" program is received at tuner, 215, and displayed at monitor, 202M. Accordingly, transmitting said messages will also cause the decoder associated with tuner, 215-- decoder, 282--to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is identical to said 1st monitor information (#3) and 2nd monitor information (#3) except that the source mark information identifies decoder, 282, rather than decoder, 203. Likewise, unless the Fig. 1B information overlaid at microcomputer, 205, covers and obliterates the embedded information of said messages that is inputted from divider, 4, to microcomputer, 205, and would otherwise be transmitted to monitor, 202M, in the combined programming outputted by microcomputer, 205, (which covering and obliterating does not occur in example #3), transmitting said messages will also cause the decoder, 145, to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is also identical to said 1st and 2nd monitor information (#3) except that the source mark information identifies decoder, 145.</p> <p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in</p> <p>In the fashion described above, receiving said third transmission of monitor</p>

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Claim Language	Reference	Reference	Language
			information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.
		Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
controlling a processor or computer to process	Column 20 lines 31-33.	Page 472 lines 15-17.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
a viewer reaction to a unit of programming or	Column 20 lines 19-26.	Page 471 lines 6-25.	Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to

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Reference		Language		Reference	
<p>an image outputted at said output device, said step of controlling comprising the steps of:</p> <p>(1) storing a datum that identifies a unit of programming or</p>	<p>Column 19 lines 67 to column 20 line 2.</p>	<p>The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p>	<p>Page 451 line 3.</p> <p>Page 26 lines 8-11.</p>	<p>the controller, 20, of the signal processor, 200, of said station.</p> <p>Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.</p> <p>And the Fig. 1C combining is displayed.</p> <p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p>	
	<p>Column 18 lines 30-37.</p>	<p>TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,</p>	<p>Page 408 lines 18-29</p> <p>Page 414 lines 13-27</p> <p>Page 15 lines 16-22</p>	<p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains a secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p> <p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the</p>	

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		transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...	
		Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.	Page 36 lines 32-33.
		Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.	Page 38 lines 11-14.
		... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.	Page 411 lines 10-15
		Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.	Page 418 line 23 to page 419 line 15.
		In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information	Page 411 line 28 to page 412 line 2.
		for recording and subsequent transmission to a remote data collection site.	

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an image outputted at said output device; and	Column 16 lines 18-21.	of said particular television program in	
		The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1 st monitor information (#3).")	Page 173 line 30 to page 174 line 23 from example #3.
		In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.	Page 419 lines 4-15.
		[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.	Page 28 lines 25-35.
	TV signal decoder, 145, for TV set, 144 (which may receive programming inputs and associated signals generated or	The programming of said "Wall Street Week" program is received at tuner, 215, and displayed at monitor, 202M. Accordingly,	Page 322 line 26 - Page 323 line 11.

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		transferred by microcomputer, 142).	transmitting said messages will also cause the decoder associated with tuner, 215-- decoder, 282--to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is identical to said 1st monitor information (#3) and 2nd monitor information (#3) except that the source mark information identifies decoder, 282, rather than decoder, 203. Likewise, unless the Fig. 1B information overlaid at microcomputer, 205, covers and obliterates the embedded information of said messages that is inputted from divider, 4, to microcomputer, 205, and would otherwise be transmitted to monitor, 202M, in the combined programming outputted by microcomputer, 205, (which covering and obliterating does not occur in example #3), transmitting said messages will also cause the decoder, 145, to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is also identical to said 1st and 2nd monitor information (#3) except that the source mark information identifies decoder, 145.
(2) passing data of the availability, use or usage of programming or an image to a processor or computer that controls the selection or communication of programming materials for	Column 18 lines 30-37.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.
			Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...

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		<p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p>
	Page 15 lines 16-22	
	Page 36 lines 32-33.	
	Page 38 lines 11-14.	
	Page 411 lines 10-15	
	Page 418 line 23 to page 419 line 15.	
	Page 411 line 28 to	
	for recording and subsequent transmission	

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		said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in	
		The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1 st monitor information (#3).")	<p>page 412 line 2.</p> <p>Page 173 line 30 to page 174 line 23 from example #3.</p>
		In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.	Page 419 lines 4-15.
		[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It	Page 28 lines 25-35.

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outputting at said receiver station; and	Column 16 lines 18-21.	TV signal decoder, 145, for TV set, 144 (which may receive programing inputs and associated signals generated or transferred by microcomputer, 142).	<p>has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>The programming of said "Wall Street Week" program is received at tuner, 215, and displayed at monitor, 202M. Accordingly, transmitting said messages will also cause the decoder associated with tuner, 215-- decoder, 282--to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is identical to said 1st monitor information (#3) and 2nd monitor information (#3) except that the source mark information identifies decoder, 282, rather than decoder, 203. Likewise, unless the Fig. 1B information overlaid at microcomputer, 205, covers and obliterates the embedded information of said messages that is inputted from divider, 4, to microcomputer, 205, and would otherwise be transmitted to monitor, 202M, in the combined programming outputted by microcomputer, 205, (which covering and obliterating does not occur in example #3), transmitting said messages will also cause the decoder, 145, to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is also identical to said 1st and 2nd monitor information (#3) except that the source mark information identifies decoder, 145.</p>	<p>Page 322 line 26 - Page 323 line 11.</p>	<p>... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and</p>
	<p>controlling a processor or computer to process</p> <p>a viewer reaction to a unit of programming or</p>	<p>Column 20 lines 31-33.</p> <p>Column 19 lines 60 to page 20 line 2.</p>		<p>Page 472 lines 15-17.</p> <p>Page 25 line 34 to page 26 line 2.</p>	

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<p>an image outputted at said output device, said step of controlling comprising the steps of:</p>	<p>transmitted in the programing transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p> <p>Column 19 lines 67 to column 20 line 2.</p>	<p>transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>Page 26 lines 4-11.</p> <p>Page 451 line 3.</p> <p>Page 451 line 3.</p> <p>Page 26 lines 8-11.</p>

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		Reference	Language	Reference	Language
(1) controlling a receiver to receive or a storage location to communicate a unit of programming associated with said unit of programming or image or in response to said viewer reaction; and	Column 20 lines 31-36.	This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix</p>	<p>Page 471 line 26 to page 472 line 17.</p> <p>Page 476 line 34 to page 477 line 8.</p> <p>Page 477 lines 8-17.</p>	

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				switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...
(2) outputting said communicated unit of programming at an output device of said receiver station.	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 473 lines 3-13.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe ... instructions ...
			Page 477 lines 12-17.	... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....
			Page 477 lines 23-29.	... causes ... said decoder, 290, to detect and process properly the information of said second message.
			Page 478 lines 1-5.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
			Page 475 lines 1-2.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.

63. A method for tracking	Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer	Page 472 lines 23-27.	... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record
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a reception of a control signal and	Column 20 lines 37-39.	and all necessary equipment was enabled. The signal transmission from processor, 204, also passes a signal word to signal processor, 200, ...	Page 473 line 29 to page 474 line 1. Page 477 lines 8-23.	contains particular program unit information and TV567# information. Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above. In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.") In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due
a function of said control signal	Column 20 lines 37-42.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200,	Page 477 lines 8-23.	

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		course, said programming originating ...	
		By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")	Page 281 lines 1-6.
		... the information of said segments is encrypted prior to transmission ... The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ... Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".	Page 282 line 2 to page 283 line 33.
		which, in a predetermined fashion, signal processor, 200, decrypts and transfers	
		to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.	Page 478 lines 1-5.
at a receiver station in	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio	Page 390 lines 30-35.
		Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of	

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			the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
		Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
a data network, said receiver station having	Column 9 lines 21-22.	Page 273 lines 6-19.	Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a particular instruct-to- receive signal. Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.
a processor,	Column 6 lines 23-26.	Page 29 lines 4-7.	See Fig. 2. Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
a storage device, and	Column 20 lines 54-56.	Page 28 lines 25-35.	[Signal processor 200 in Fig.7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records

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a plurality of peripheral device interface connections, said method comprising the steps of:	Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
receiving said control signal at said receiver station;	Column 20 lines 27-31.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 ...	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...
detecting said control signal at said receiver station;	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...

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	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.
passing said control signal from said processor to at least one peripheral device	Column 20 lines 37-42.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200,	Page 477 lines 8-23.
		which, in a predetermined fashion, signal processor, 200, decrypts and transfers	Page 281 lines 1-6.
			... the information of said segments is encrypted prior to transmission ... The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ... Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that

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through one of said plurality of peripheral device interface connections;	Column 12 lines 45-53.	to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.	Page 478 lines 1-5.
		Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.	Page 337 lines 1-19.
		See Fig. 1.	
establishing what function said control signal from said step of passing said control	Column 20 lines 45-46.	... and all necessary equipment was enabled.	Page 473 line 29 to page 474 line 1.
		is "100110" ... and modify the information at said location to be "111111".	
		(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)	
		Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.	See Fig. 2.
		Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe-... instructions at microcomputer, 205, and to transfer particular	

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signal	Column 20 lines 41-42.	... to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.	Page 478 lines 1-5.	meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above. (Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
performing at said at least one peripheral device; and	Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.	Page 472 lines 23-27.	... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
storing on said storage device the function of said control signal from said step of establishing what function said control signal performed at said at least one peripheral device.			Page 473 line 29 to page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe-... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.

64. The method of claim 63 wherein said function is a printer function.	Column 20 lines 36-37.	... and instruct control means, 226, to activate printer, 221.	Page 474 lines 3-7.	... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221
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65. The method of claim 63 wherein said function is a display function.	Column 20 lines 36-37.	... and instruct control means, 226, to activate printer, 221.	Page 474 lines 3-7.	... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221....
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66. The method of claim 63 wherein said function is a media coordination function.	Column 20 lines 12-15.	FIG 6D illustrates one method for coordinating the presentation of information through the use of print with video. FIG 6D also illustrates possible uses of a decrypter and a local input.	Page 469 lines 3-6. Page 478 lines 1-5.	Fig. 7F illustrates a method for generating and communicating information to selected subscribers through the coordination of computers, television, and broadcast print. Fig. 7F also illustrates use of a local input, 225. (Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above—for example, in the method of the first message of example #4.)
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67. The method of claim 63 wherein said function is recorder function.	Column 20 line 49-52.	Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16.	Page 473 line 29 to page 474 line 1 Page 314 line 30-33.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above. At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.
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68. The method of claim 63 wherein said function is a television function.	Column 20 lines 27-32.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, ...	Page 471 line 26 to page 472 line 17.	<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p>
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69. The method of claim 63 wherein said function is a tuner function.	Column 20 lines 33-36.	... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	Page 476 line 34 to page 477 line 8.	<p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p>
			Page 477 lines 8-17.	<p>In this alternate method, ... said first SPAM message causes controller, 20, of signal</p>

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				processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...
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70. The method of claim 63 wherein said function is a data processing function.	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
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71. The method of claim 63 wherein said function is an electro-mechanical control function.	Column 20 lines 36-37.	... and instruct control means, 226, to activate printer, 221.	Page 474 lines 3-7.	... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...
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72. The method of claim 63 further comprising the step of: recording the passing of said control signal from said step of passing.	Column 7 lines 50-54. Column 7 lines 65-67.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 31 lines 10-14. Page 31 line 30 to page 32 line 6.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate,
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			hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...
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73. A method of processing signals	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2. Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
at a receiver station having a computer and an output device	Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
to deliver at the output device of a combined programming presentation	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer

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including a coordinated output,	Column 19 lines 31-34.	FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	<p>Page 451 line 3.</p> <p>Page 18 lines 24-27.</p> <p>page 450 line 27 to page 451 line 11.</p>
		generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	<p>And the Fig. 1C combining is displayed.</p> <p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p>
	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	<p>TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...</p> <p>Page 26 lines 8-11.</p>

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said computer having a storage device for storing user data	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.
and said output device outputting at least mass medium programming, said method comprising the steps of:	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.
storing user data;	Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.
receiving mass medium programming from a programming source and	Column 19 lines 28-29.	...and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1. Page 446 lines 17-21.
	Column 19 lines 23-25.	... microcomputer, 205, may instruct tuner,	Page 437 lines 1-6.
		Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	
		Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.	
		... and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....	
		Determining a match causes microcomputer,	

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	214, to switch box, 201, to channel X ...	205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...	Page 439 lines 9-15. Page 295 lines 6-8. Page 439 lines 9-15. Page 445 line 24 to page 446 line 1. Page 446 lines 17-21.
outputting said mass medium programming at said output device;	Column 19 lines 27-29. ...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."		

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receiving one of a broadcast information and a cablecast information transmission	Column 6 lines 26-30.	As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	Page 29 lines 11-15.
including an instruct signal which is effective to control receiver station apparatus and	Column 19 lines 14-15.	... pass all program and channel identifiers on all programming being cablecast on the multi-channel system.	Page 435 lines 16-18.
		Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.	Page 248 lines 22-26 from example #5.
		Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...	Page 250 lines 13-16 from example #5.
		Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter- monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment segment) then meter-monitor segment information that includes the "program unit identification	Page 252 lines 15-35 from example #5.

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at least one of a code and a datum to serve as evidence of one of:	Column 19 lines 43-44.	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...</p> <p>The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p>	code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...
	Column 2 lines 63-66.		<p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p>
	Column 3 lines 3-8.		<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p>
	Column 7 lines 65-67.		<p>Buffer/comparator, 14, receives signal</p>
		Page 14 line 32 to page 15 line 2.	<p>Buffer/comparator, 14, receives signal</p>
		Page 31 line 30 to page	

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		identifying, according to a predetermined fashion, which signals are to be recorded.	32 line 6.	information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...	
	Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.	Page 31 line 30 to page 32 line 1.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...	
	Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.	Page 33 lines 18-20. Page 273 lines 4-6. Page 273 lines 21-25.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor ... The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. ... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.	
(1)	a passing of said instruct signal to controllable apparatus and;	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.	
(2)	a functioning	Processor or monitor, 12, analyzes, in a	Page 31 lines 10-22.	Controller, 12, receives the signals inputted	

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of said controllable apparatus in response to said instruct signal;		pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.
detecting said instruct signal in said one of	Column 6 lines 48-50. Column 7 lines 6-11.	This base band signal is then transmitted through separate paths to three separate detector devices. If one returns to FIG. 1, one sees that the three separate lines of information outputted from TV signal decoder, 30, are then gated to a buffer/comparator, 8, which also receives other inputs from the other separate receivers comprising similar filters, demodulators, and decoders for other channels of interest.	This base band signal is then transferred through separate paths to three separate detector devices. Decoder, 30, which is shown in detail in Fig. 2A, and decoder, 40, which is shown in Fig. 2B, detect signal information embedded in the respective inputted television and radio frequencies, ... and output said signals and said modified signals to buffer/comparator, 8.
said broadcast information transmission and said cablecast information transmission and	Column 7 lines 47-49. Column 6 lines 30-41.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12. The cable transmission is input simultaneously to switch 1 and mixer 2. The broadcast transmission is input to switch 1. Switch 1 and mixers 2 and 3 are all controlled by local oscillator and switch control 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12. The cable transmission is inputted simultaneously to switch, 1, and mixer, 2. The broadcast transmission is inputted to switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and

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<p>passing said detected instruct signal to said computer; and</p>	<p>television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer 3 which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.</p> <p>Column 19 lines 18-20.</p>	<p>television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.</p>
<p>Column 19 lines 18-20.</p>	<p>[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p>
<p>Column 19 lines 18-20.</p>	<p>[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.</p>	<p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p>
<p>Column 19 lines 18-20.</p>	<p>[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.</p>	<p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ...</p>
<p>Column 19 lines 18-20.</p>	<p>[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.</p>	<p>Automatically, control processor, 121, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred-- together with its newly added header</p>
<p>Column 19 lines 18-20.</p>	<p>[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.</p>	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 268 line 28 to page 269 line 12 from example #5.</p>

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controlling said computer based on said detected instruct signal, said step of controlling including: (1) selecting	Column 19 lines 20-25.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	<p>information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a</p>
			<p>Page 436 line 9 to page 437 line 6.</p> <p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p>

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		selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...	Page 439 lines 9-15.
a specific portion of data;	Column 19 lines 43-44. Column 3 lines 6-8.	... instruction signals embedded in the "Wall Street Week" programming transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 21 lines 23-24. Page 14 line 35 to page 15 line 2.
(2) communicating said selected specific portion of data to said storage device; and subsequently	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	Page 23 line 35 to page 24 line 16. Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
		A command is an instance of signal	Page 44 lines 14-17.

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		information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a	
		(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)	Page 26 lines 20-28.
(3) ceasing to communicate an image from said storage device, said image based on said specific portion of data;	Column 20 lines 4-5.	... microcomputer, 205, ceases transmitting its own graphic to TV set, 202, ...	Page 27 lines 4-7.
(4) delivering at said output device said combined programming presentation, said combined programming presentation comprising simultaneous output of said received mass medium programming with said image,	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.
said combined programming	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening,	Page 451 line 3. Page 23 line 35 to page 24 line 16.
		... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And the Fig. 1C combining is displayed. Subsequently, a second series of instructions is embedded and transmitted at said program	

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presentation presented in the period of time between said step of communicating and said step of ceasing to communicate;		several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	<p>originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>... causes microcomputer, 205, to cease</p>
			<p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>
	Column 20 lines 4-5.	... microcomputer, 205, ceases	Page 27 lines 4-7.

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	transmitting its own graphic to TV set, 202, ...				overlaying the graphic information onto the received composite video and to commence transmitting the received composite video transmission unmodified.
detecting said at least one of a code and a datum evidencing said one of:	<p>Column 6 lines 48-50.</p> <p>Column 7 lines 65-67.</p>	<p>This base band signal is then transmitted through separate paths to three separate detector devices.</p> <p>Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.</p>	<p>Page 34 line 35 to page 35 line 1.</p> <p>Page 31 line 30 to page 32 line 6.</p>	<p>This base band signal is then transferred through separate paths to three separate detector devices.</p> <p>Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...</p>	
(1) a passing of said instruct signal to said controllable apparatus and;	Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.	
(2) a functioning of said controllable apparatus in response to said instruct signal;	Column 7 lines 50-60.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 31 lines 10-22.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate	

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storing said at least one of a code and a datum.	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.		Page 435 lines 16-18. Page 267 lines 20-28 from example #5.	information to buffer/comparator, 14. In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
				Page 268 line 28 to page 269 line 12 from example #5.	In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)
	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined		Page 31 line 30 to page 32 line 6.	Buffer/comparator, 14, receives signal information that is meter information and/or

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		fashion, which signals are to be recorded.		monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...
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74. The method of claim 73, wherein said image one of: (1) supplements a television program; and	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 473 lines 3-13.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe ... instructions ...
			Page 477 lines 12-17.	... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....
			Page 477 lines 23-29.	... causes ... said decoder, 290, to detect and process properly the information of said second message.
			Page 478 lines 1-5.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
			Page 475 lines 1-2.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.
	Column 20 lines 16-23.	Suppose a viewer watches a television	Page 470 lines 1-3 and	... transmits the programming transmission of

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		program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program. Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."	Page 470 lines 9-13. Page 470 lines 19-21. Page 471 lines 6-13.	a particular conventional television program on cooking techniques that is called "Exotic Meals of India." At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is retransmitted by the intermediate station of Fig. 6; to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M. Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#".	
(2) completes a television program, and	Column 19 line 67 to column 20 line 1. Column 19 lines 59-60.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ... Then the host says, "And here is what your portfolio did."	Page 26 lines 8-11. Page 25 lines 33-34.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ... Then the host says, "And here is what your portfolio did."	
wherein a user places an order in response to an offer communicated in said television program.	(1) Column 20 lines 19-26.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local	Page 471 lines 6-25.	Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information	

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	<p>input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further ...</p>	<p>that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.</p> <p>Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.</p>
<p>(2) Column 19 lines 20-25.</p>	<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...</p>	<p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes</p>
	<p>Page 436 line 9 to page 437 line 6.</p>	

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			microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatusto cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
			Page 439 lines 9-15.
			Page 295 lines 6-8.
			Page 439 lines 9-15.

75. The method of claim 73, further comprising the step of: programming said receiver station to process viewer data of interest and to respond to at least one instruct signal associated with some mass medium programming.	Column 19 lines 42-53.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 450 lines 31-32. Page 21 lines 20-24. Page 451 lines 6-7. Page 23 line 35 to page 24 line 4.	... caused his microcomputer, 205, to be preprogrammed as described above; ... Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ... Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to
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Reference	Reference	Reference	Language
		<p>microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>	
	<p>These signals instruct microcomputer, 205,</p>	<p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-16.</p>	<p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."</p>
	<p>to generate several graphic video overlays,</p>	<p>Page 451 lines 7-11.</p>	<p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p>
	<p>which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to</p>	<p>Page 19 line 29 to page 20 line 20.</p>	<p>Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic</p>

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		overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.	
	transmit these overlays to TV set, 202,	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.	Page 26 lines 4-8.
	upon command.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a ...	Page 44 lines 14-17.
		(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)	Page 26 lines 20-28.
	Column 18 lines 45-47.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks ...	Page 420 lines 3-4.

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76. The method of claim 73 further comprising the step of: receiving	Column 19 lines 63-66.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202.	<p>Page 26 lines 1-8.</p> <p>Page 37 line 26 to page 38 line 8.</p>
		<p>Said signal is identified by decoder, 203; transferred by microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...</p>	
a command one of	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	<p>Page 23 line 35 to page 24 line 16.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a</p>

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		generate several graphic video overlays, ...	Page 451 lines 7-11.
		and to transmit these overlays to TV set, 202,	Page 26 lines 4-8.
		upon command.	Page 44 lines 14-17.
			Page 26 lines 20-28.
embedded in and	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.
associated with	Column 19 lines 15-18.	Signal processor, 200, receives this instruction from microcomputer, 205, at its processor or monitor, 12, which reacts, ...	Page 288 lines 16-20.
		"program instruction set.")	
		... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.	
		Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.	
		A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.	
		(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...	
		... instruction signals embedded in the "Wall Street Week" programming transmission.	
		...microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.	

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a signal that contains a portion of mass medium programming.	Column 19 lines 60-65.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...	Page 25 line 33 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			Page 26 line 4.	Said signal instructs microcomputer, 205, ...

77. The method of claim 73 further comprising the step of: storing a locally input command that one of designates and specifies one of:	Column 19 lines 5-8.	In another example, microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast.	Page 428 lines 21-26.	The program-unit-of-interest information programmed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.
(1) mass medium programming to be one	Column 19 lines 23-29.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and	Page 437 lines 1-6.	Determining a match causes microcomputer, 205, automatically to input said

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of outputted and stored;		may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."		<p>please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...</p> <p>... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, ...</p> <p>Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p> <p>... and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and</p>
			Page 295 lines 6-8.	
			Page 439 lines 9-15.	
			Page 445 lines 24-27.	
			Page 446 lines 18-23.	
			Page 445 line 24 to page 446 line 1.	
			Page 445 line 35 to page 446 line 1.	
			Page 446 lines 17-21.	

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(2) a fashion in which to present one of a portion of said mass medium programming and a portion of computer output.	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 23 line 35 to page 24 line 16.	audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ... Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.") ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first. Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a
		generate several graphic video overlays, ...	Page 451 lines 7-11.	
		and to transmit these overlays to TV set, 202,	Page 26 lines 4-8.	
		upon command.	Page 44 lines 14-17.	
			Page 26 lines 20-28.	

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(3) a time in which to one of output and store one of a portion of said mass medium programming and a portion of computer output.	Column 19 lines 20-29.	<p>combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p>	<p>Page 436 line 9 to page 437 line 6.</p> <p>Page 439 lines 9-15.</p>
		<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p> <p>Then, in a predetermined fashion, microcomputer, 205, may</p>	

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Language		Language		Language	
		<p>instruct tuner, 214, to switch box, 201, to channel X</p> <p>and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week,"</p> <p>and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on</p> <p>and tuner, 215, to tune appropriately to "Wall Street Week."</p>	<p>Page 295 lines 6-8.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p> <p>Page 445 line 24 to page 446 line 1.</p> <p>Page 445 line 35 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p>	<p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217, ...</p> <p>...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>...instructions causes controller, 20, to switch power on to monitor, 202M, ...</p> <p>Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p> <p>...and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p>	
78. The method of claim 73 further comprising the step of: controlling one of a processor and a computer to process	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...	

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a viewer reaction to one of mass medium programming and	Column 20 lines 19-26.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further ...	Page 471 lines 6-25. Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station. Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory. And the Fig. 1C combining is displayed.
an image outputted at said output device, said step of controlling including:	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. Page 451 line 3. Page 26 lines 8-11.
(1) assembling a record that includes additional data besides said viewer reaction; and	Column 20 lines 42-45.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
	Column 9 line 68 to column 10 line 2.	The controller, 20, instructs buffer/comparator, 14, what signals to	Buffer/comparator, 14, operates under control of controller, 20, ...

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		discard and how to mark signals and assemble signal strings.	Page 223 lines 22-33.
			<p>Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter & monitor information from (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing information from clock, 18.</p> <p>When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion then discard all information of said record from its memory and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion.</p>
(2) transmitting said record to a remote data collection station.	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	Page 224 lines 12-18.
			<p>[Signal processor in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called</p>
			Page 28 lines 25-35.

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				<p>"ratings" stations that collect statistical data on programming availability and usage.</p> <p>... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information, ...</p> <p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...</p> <p>Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p> <p>Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal</p>
	that site can determine for billing purposes that the recipe was,		Page 44 lines 26-30.	
			Page 471 lines 26-31.	
			Page 473 lines 3-8.	
	first, ordered		Page 472 lines 23-27 with	
			Page 471 lines 14-16.	
	and, second, delivered.		Page 473 line 29 to Page 474 line 1.	

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	Column 9 lines 8-13.	Digital recorder, 16, can tell the controller, 20, when it reaches predetermined levels of fullness to permit the controller, 20, to instruct auto dialer, 24, to contact an appropriate remote site allowing the recorder, 16, to output its data making memory available.	record of meter information in the fashion described above. Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness. In each example, ... recorder, 16, measures the quantity of its recording capacity that holds signal records, in a predetermined fashion, and determines that said quantity is equal to or greater than said particular fullness information. Said determining causes recorder, 16, to transfer a particular instruct-to-call instruction to controller, 20, that causes controller, 20, to activate telephone connection, 22, and proceed with a particular preprogrammed telephone signal record transfer sequence that is fully automatic. The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Automatically said second computer responds with a particular transmission complete signal that causes controller, 20, to terminate said telephone call then to cause recorder, 16, to erase from memory all said meter charge information.
			Page 33 lines 4-6. Page 272 line 26 to page 273 line 8. Page 275 line 33 to page 276 line 2.
79. The method of claim 73 further comprising the step of: controlling one of a processor and a computer to process	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...

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a viewer reaction to one of mass medium programming and	Column 20 lines 19-26.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further ...	Page 471 lines 6-25.	Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station. Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory. And the Fig. 1C combining is displayed.	
an image outputted at said output device, said step of controlling including:	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	
(1) detecting a datum that identifies one of said mass medium programming and	Column 18 lines 30-35.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...	Page 408 lines 18-29	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the	

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		above escribed fashion.
		<p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p> <p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p>
		<p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p>
		<p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p>
		<p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p>
said image outputted at	Column 16 lines 18-21.	TV signal decoder, 145, for TV set, 144
		Page 322 line 26 -

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<p>said output device; and</p> <p>(2) transmitting said datum to a remote data collection station.</p>	<p>Column 18 lines 36-37.</p>	<p>(which may receive programming inputs and associated signals generated or transferred by microcomputer, 142).</p> <p>... for recording and subsequent transmission to a remote data collection site.</p>	<p>Page 323 line 11.</p> <p>Page 411 line 28 to page 412 line 2.</p> <p>Page 419 lines 4-15.</p>
			<p>program is received at tuner, 215, and displayed at monitor, 202M. Accordingly, transmitting said messages will also cause the decoder associated with tuner, 215-- decoder, 282--to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is identical to said 1st monitor information (#3) and 2nd monitor information (#3) except that the source mark information identifies decoder, 282, rather than decoder, 203. Likewise, unless the Fig. 1B information overlaid at microcomputer, 205, covers and obliterates the embedded information of said messages that is inputted from divider, 4, to microcomputer, 205, and would otherwise be transmitted to monitor, 202M, in the combined programming outputted by microcomputer, 205, (which covering and obliterating does not occur in example #3), transmitting said messages will also cause the decoder, 145, to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is also identical to said 1st and 2nd monitor information (#3) except that the source mark information identifies decoder, 145.</p> <p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in</p> <p>In the fashion described above, receiving said third transmission of monitor</p>

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			<p>information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p>
			Page 28 lines 25-35.

80. The method of claim 73 further comprising the step of: controlling one of a processor and a computer to process	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
a viewer reaction to one of mass medium programming and	Column 20 lines 19-26.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further ...	Page 471 lines 6-25.	Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local

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an image outputted at said output device, said step of controlling including:	Column 19 lines 67 to column 20 line 2.	input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station. Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory. And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.
(1) storing a datum that identifies one of said mass medium programming and	Column 18 lines 30-35.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...	Page 408 lines 18-29
		Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion. Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44. The frequencies may convey television, radio, or other programming transmissions. The	Page 414 lines 13-27 Page 15 lines 16-22

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said image outputted at said output device; and	Column 16 lines 18-21.	TV signal decoder, 145, for TV set, 144 (which may receive programming inputs and associated signals generated or transferred by microcomputer, 142).	<p>Page 411 lines 10-15</p> <p>Page 418 line 23 to page 419 line 15.</p> <p>Page 322 line 26 – Page 323 line 11.</p>	<p>input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>The programming of said "Wall Street Week" program is received at tuner, 215, and displayed at monitor, 202M. Accordingly, transmitting said messages will also cause the decoder associated with tuner, 215-- decoder, 282--to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is identical to said 1st monitor information (#3) and 2nd monitor information (#3) except that the source mark information identifies decoder, 282, rather than decoder, 203. Likewise, unless the Fig. 1B information overlaid at microcomputer, 205, covers and obliterates the embedded information of said messages that is inputted</p>

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		from divider, 4, to microcomputer, 205, and would otherwise be transmitted to monitor, 202M, in the combined programming outputted by microcomputer, 205, (which covering and obliterating does not occur in example #3), transmitting said messages will also cause the decoder, 145, to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is also identical to said 1st and 2nd monitor information (#3) except that the source mark information identifies decoder, 145.	
(2) passing data of one of the availability, use, and usage of said one of said mass medium programming and said outputted image to one of said processor and said computer that controls one of the selection and communication of mass medium programming for output at said receiver station.	Column 18 lines 36-37.	... for recording and subsequent transmission to a remote data collection site.	Page 411 line 28 to page 412 line 2.
			<p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It</p>
			Page 419 lines 4-15.
			Page 28 lines 25-35.

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				has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
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81. The method of claim 73 further comprising the step of: controlling one of a processor and a computer to process	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...
a viewer reaction to one of mass medium programming and	Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 25 line 34 to page 26 line 2. Page 37 line 26 to page 38 line 8.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ... Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic
			Page 26 lines 4-11.	

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an image outputted at said output device, said step of controlling including:	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And the Fig. 1C combining is displayed. And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
(1) controlling one of a receiver to receive and a storage location to communicate a first mass medium programming associated with one of said mass medium programming and said outputted image in response to said viewer reaction; and	Column 20 lines 31-36.	This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ... (An alternate method for inputting said second message to the microcomputers, 205,
			Page 471 line 26 to page 472 line 17. Page 476 line 34 to page 477 line 8.

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				<p>at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p>
(2) outputting said communicated first mass medium programming at said output device at said receiver station.	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	<p>Page 477 lines 8-17.</p> <p>Page 473 lines 3-13.</p> <p>Page 477 lines 12-17.</p> <p>Page 477 lines 23-29.</p>	<p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe-... instructions ...</p> <p>... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....</p> <p>... causes ... said decoder, 290, to detect and process properly the information of said second message.</p>

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				Page 478 lines 1-5.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
				Page 475 lines 1-2.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.
82. The method of claim 73, wherein said at least one of said code and said datum serves as evidence of both: (1) the passing of said instruct signal to said controllable apparatus; and (2) the functioning of said controllable apparatus in response to said instruct signal.	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	
	Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 32 to page 15 line 2.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	
	Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.	
	Column 7 lines 59-60.	If [a signal or signals] are to be processed	Page 31 lines 18-22.	If [a signal or signals] contain meter and/or	

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		further, processor or monitor, 12, passes them to buffer/comparator, 14.		monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.
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83. A method of communicating mass medium programming to	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
at least one	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
receiver station each of which includes one of	Column 3 lines 48-51.	Another method has application at receiver sites such as private homes or public places like theaters, hotels, brokerage offices, etc., whether commercial establishments or not.	Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
a broadcast programming receiver and a cablecast programming receiver,	Column 6 lines 30-41.	The cable transmission is input simultaneously to switch 1 and mixer 2. The broadcast transmission is input to switch 1. Switch 1 and mixers 2 and 3 are all controlled by local oscillator and switch	Page 12 lines 30-35.	It is the further purpose of this invention to provide means and methods for the automation of ultimate receiver stations, ... Such ultimate receiver stations may be private homes or offices or commercial establishments such as theaters, hotels, or brokerage offices.
			Page 29 lines 15-26.	The cable transmission is inputted simultaneously to switch, 1, and mixer, 2. The broadcast transmission is inputted to switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch

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an output device,	control 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer 3 which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.	control, 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.	
	Column 18 lines 13-14.	Said subscriber switches power on to TV set, 202, and manually selects the proper channel, which is, for example, channel 13, at the television tuner, 215, of said set, 202, ...	Page 407 lines 12-15.
	Column 19 lines 27-29.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.	Page 445 line 24 to page 446 line 1.
a control signal detector,	TV signal decoder, 203, detects signals in the programming transmission on the channel which signals it transfers to monitor or processor, 204.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...	Page 446 lines 17-21.
	Column 18 lines 14-17.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of a "01" header, an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the	Page 408 lines 18-29.

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a processor operably connected to said output device, and with each said receiver station adapted	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2. Page 37 line 26 to page 38 line 8.
	Column 18 lines 22-24.	Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly.	Page 408 lines 31-34.
	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2. Page 37 line 26 to page 38 line 8.

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to detect and respond to at least one instruct signal, said method comprising the steps of:	Column 18 lines 14-19.	TV signal decoder, 203, detects signals in the programming transmission on the channel which signals it transfers to monitor or processor, 204. Monitor or processor, 204, determines that certain signals are addressed to switch, 212, and transfers these signals to switch, 212.	Page 408 lines 18-29.
	Column 19 lines 60-65.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...	Page 25 line 33 to page 26 line 2.
		relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of ... an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, ... Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209. At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is	Page 408 lines 31-34. Page 37 line 26 to page 38 line 8.

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		preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	
		Said signal instructs microcomputer, 205, ...	
receiving the mass medium programming to be transmitted and	Column 10 lines 30-39.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.	Page 26 line 4.
	Column 18 lines 11-13.	A person decides to watch a program on television that is stereo simulcast on a local radio station, too.	Page 324 lines 23-31.
	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 407 lines 9-11.
		... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs	Page 445 line 24 to page 446 line 1.

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delivering said mass medium programming to transmitter apparatus;	Column 10 lines 40-47.	All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	<p>Page 446 lines 17-21.</p> <p>Page 324 line 31 to page 325 line 4.</p>
receiving said at least one instruct signal at said transmitter station, said at least one instruct signal at the receiver station operating to	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	<p>Page 324 lines 8-24.</p> <p>Page 324 lines 23-31.</p>
	Column 10 lines 30-39.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59.	<p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions</p>

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<p>control a receiver station apparatus and store at least one of a code and a datum</p> <p>to serve as evidence of one of:</p>	Column 4 lines 5-6.	Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programing input means, 62, can receive programing transmissions.	are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.
	Column 18 lines 14-17.	These techniques employ signals embedded in programs.	The present invention employs signals embedded in programming.
	Column 18 lines 22-24.	TV signal decoder, 203, detects signals in the programing transmission on the channel which signals it transfers to monitor or processor, 204.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of a "01" header, an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, appropriate padding bits, an information segment that contains particular 104.1-MHz information, and an end of file signal. Said message is detected at said decoder, 203, and inputted to said controller, 39,
	Column 18 lines 30-37.	Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly.	Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.
			Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... and to transfer said message to ... So transferrng said message is the controlled function that the information said header and execution segment cause controller, 39, to perform.
		TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals	Periodically thereafter, said program originating studio embeds in said transmission

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<p>that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,</p> <p>The processors, 204 and 210, transfer this information to signal processor, 200,</p>		<p>and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p> <p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of</p>	
		Page 414 lines 13-27	
		Page 15 lines 16-22	
		Page 36 lines 32-33. Page 38 lines 11-14. Page 411 lines 10-15	

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				said signal processor, 200, in the fashion of example #3 above.
			Page 418 line 23 to page 419 line 15.	Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.
	for recording and subsequent transmission to a remote data collection site.		Page 411 line 28 to page 412 line 2.	In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in
			Page 173 line 30 to page 174 line 23 from example #3.	The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1 st monitor information (#3).")

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				Page 419 lines 4-15.	In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.
				Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
(a) a passing of said at least one instruct signal to controllable apparatus; and		Column 18 lines 14-17.	TV signal decoder, 203, detects signals in the programming transmission on the channel which signals it transfers to monitor or processor, 204.	Page 408 lines 18-29.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of a "01" header, an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, appropriate padding bits, an information segment that contains particular 104.1-MHz information, and an end of file signal. Said message is detected at said decoder, 203, and inputted to said controller, 39,
(b) a functioning of said controllable apparatus in response to said at least one instruct signal;		Column 18 lines 24-25.	These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.	Page 410 lines 10-11.	Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ...

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transferring said at least one instruct signal and said at least one of a code and a datum to said transmitter; and	Column 10 lines 40-47. Column 4 lines 5-6. Column 18 lines 14-17.	All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92. These techniques employ signals embedded in programs. TV signal decoder, 203, detects signals in the programing transmission on the channel which signals it transfers to monitor or processor, 204.	Page 324 line 31 to page 325 line 4. Page 13 lines 25-26. Page 408 lines 18-29.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92. The present invention employs signals embedded in programming. Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of a "01" header, an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, appropriate padding bits, an information segment that contains particular 104.1-MHz information, and an end of file signal. Said message is detected at said decoder, 203, and inputted to said controller, 39, In television audio, they are likely to lie between eight and fifteen kilohertz.
transmitting said mass medium programming, said at least one instruct signal, and said at least one of a code and a datum.	Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ...	Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate

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	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...
	Column 18 lines 14-17.	TV signal decoder, 203, detects signals in the programming transmission on the channel which signals it transfers to monitor or processor, 204.	Page 408 lines 18-29.	The present invention employs signals embedded in programming. Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of a "01" header, an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, appropriate padding bits, an information segment that contains particular 104.1-MHz information, and an end of file signal. Said message is detected at said decoder, 203, and inputted to said controller, 39,
	Column 4 lines 25-26.	In television audio, they are likely to lie between eight and fifteen kilohertz.	Page 14 lines 14-15.	In television audio, they are likely to lie between eight and fifteen kilohertz.

84. The method of claim 83, wherein said step of transmitting directs one of a broadcast transmission and a cablecast transmission to a plurality of receiver stations at the same time and	Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ...	Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...
each of said plurality of	Column 17 lines 47-53.	FIG 6 illustrates one possible	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an

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receiver stations one of receives and responds to said at least one instruct signal concurrently.		configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
	Column 20 lines 12-15.	FIG 6D illustrates one method for co-ordinating the presentation of information through the use of print with video. FIG 6D also illustrates possible uses of a decrypter and a local input.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
	Column 3 lines 48-51.	Another method has application at receiver sites such as private homes or public places like theaters, hotels, brokerage offices, etc., whether commercial establishments or not.	Fig. 7F illustrates a method for generating and communicating information to selected subscribers through the coordination of computers, television, and broadcast print. Fig. 7F also illustrates use of a local input, 225.
			(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above—for example, in the method of the first message of example #4.)
			It is the further purpose of this invention to provide means and methods for the automation of ultimate receiver stations, ... Such ultimate receiver stations may be private homes or offices or commercial establishments such as theaters, hotels, or brokerage offices.
85. The method of claim 83, wherein said step of transmitting directs said one of said broadcast transmission and said cablecast	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially

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transmission to a plurality of receiver stations at different times and	<p>Column 10 lines 15-20.</p> <p>The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.</p> <p>Column 17 lines 47-53.</p> <p>FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.</p>	<p>transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.</p> <p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.</p> <p>Features, benefits, and modes of operation of</p>	<p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 324 lines 8-17.</p> <p>Page 390 lines 30-35.</p> <p>Page 396 lines 8-10.</p>

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each of said plurality of receiver stations responds to said at least one instruct signal at a different time.	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.
		Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	
		SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....	Page 84 lines 26-28.
		... monitor information that identifies what programming is available, ...	Page 28 lines 26-27.
		Meter-monitor segments contain meter information and/or monitor information.	Page 49 lines 26-27.
	Column 11 lines 50-57.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that	Page 328 line 22 to page 329 line 1.

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	transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.		
Column 12 lines 45-53.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.	Page 337 lines 1-19.
Column 20 lines 31-36.	This signal instructs buffer/comparator, 8, that, if 567 has been received from signal	Five minutes later, said program originating studio embeds in the transmission of the	Page 471 line 26 to page 472 line 17.

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		<p>generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...</p>	<p>Page 476 line 34 to page 477 line 8.</p> <p>Page 477 lines 8-17.</p>	<p>"Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to</p>

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	Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.	Page 472 lines 23-27. Page 473 line 29 to page 474 line 1.	<p>cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p> <p>... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p>
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86. The method of claim 83, wherein a switch communicates signals selectively from a receiver and one of a memory and a recorder to said at least one transmitter, said method further comprising one of the steps of:		<p>Matrix Switch, 75, in Fig. 3B.</p> <p>TV receiver, 53, in Fig. 3A.</p> <p>VTR, 78, in Fig. 3B.</p> <p>Recorder and Player, 76, in Fig. 3B.</p> <p>Cable Channel Modulator, 83, in Fig. 3C.</p>	<p>Matrix Switch, 75, in Fig. 6A.</p> <p>TV receiver, 53, in Fig. 6A.</p> <p>78, in Fig. 6A.</p> <p>recorder/players, 76 and 78</p> <p>Recorder and Player, 76, in Fig. 6A.</p> <p>Cable Channel Modulator, 83, in Fig. 6B.</p>	
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determining a specific program input source from which to communicate a second instruct signal to said at least one transmitter;	Column 11 lines 50-54.	For example, if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, ...	Page 328 lines 22-31. matrix switch, 75, that outputs to modulator, 87. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine ... that said "code" information matches ... schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87.
controlling said switch to communicate said second instruct signal to said at least one transmitter	Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
in response to said first instruct signal which is effective at the transmitter station to instruct communication;	Column 11 lines 38-46.	By comparing identification signals on the incoming programing with the programing schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programing. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6

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	controlling said switch to communicate a third instruct signal from	Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 84 lines 26-28.	should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information. Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...
				Page 28 lines 26-27.	
				Page 49 lines 26-27.	
				Page 328 lines 14-16.	
a selected program input receiver; and		Column 11 lines 50-54.	For example, if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, ...	Page 328 line 31 to page 329 line 1.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
				Page 328 lines 22-31.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine ... that said "code" information matches ... schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87.
controlling said		Column 11 lines 61-64.	... in a predetermined fashion, to record the	Page 329 lines 13-20.	... in its preprogrammed fashion, ... to ...

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switch to communicate mass medium programming to said one of said memory and said recorder.		incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...	record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
87. The method of claim 83, wherein a controller controls a switch to communicate to said at least one transmitter one of selected mass medium programming and said at least one instruct signal, further comprising one of the steps of:	Column 11 lines 54-57. Column 19 lines 43-44.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87. ... instruction signals embedded in the "Wall Street Week" programming transmission.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. ... instruction signals embedded in the "Wall Street Week" programming transmission.
detecting a first instruct signal which is effective at the transmitter station to	Column 11 lines 38-46.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.

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instruct transmission;	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87,	Page 84 lines 26-28.
		... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 28 lines 26-27.
			Page 49 lines 26-27.
			Page 328 lines 14-16.
			Page 328 line 22 to page 329 line 1.
inputting to said controller a second instruct signal which is effective to	Column 11 lines 32-39.	By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programing	Page 327 line 35 to page 328 line 13.
		SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information. Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ... For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message

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control said switch;	unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75. By comparing identification signals on the incoming programming with the programming schedule ...	Page 84 lines 26-28.	information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 28 lines 26-27.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ...
	Column 11 lines 50-57.	Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
		Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause

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controlling said switch to one of one mass medium programming presentation and	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.
said at least one instruct signal according to a transmission schedule;	Column 19 lines 43-44. Column 11 lines 38-43.	... instruction signals embedded in the "Wall Street Week" programming transmission. By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 21 lines 23-24. Page 327 line 35 to page 328 line 13.
		matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. ... instruction signals embedded in the "Wall Street Week" programming transmission. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.	

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controlling said switch to communicate said at least one mass medium programming presentation from a specific one of	Column 11 lines 50-57.		By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			... monitor information that identifies what programming is available, ...
			Meter-monitor segments contain meter information and/or monitor information.
controlling said switch to communicate said at least one mass medium programming presentation from a specific one of	Column 11 lines 50-57.	Page 84 lines 26-28.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
		Page 28 lines 26-27.	
controlling said switch to communicate said at least one mass medium programming presentation from a specific one of	Column 11 lines 50-57.	Page 49 lines 26-27.	
		Page 328 line 22 to page 329 line 1.	

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a plurality of program input receivers; and	Column 11 lines 50-54.	For example, if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, ...	Page 328 lines 22-31.
controlling said switch to communicate one of said at least one mass medium programming presentation and said at least one instruct signal to a selected one of	Column 10 lines 49-52.	When played on video recorder and players, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted to the field.	Page 325 lines 6-9.
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.
	Column 19 lines 43-44.	... instruction signals embedded in the	Page 21 lines 23-24.
		For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine ... that said "code" information matches ... schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.

... instruction signals embedded in the "Wall

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a plurality of transmitters.	Column 10 lines 43-47.	"Wall Street Week" programming transmission. ... and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 325 lines 1-4.	Street Week" programming transmission. ... apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
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88. The method of claim 83, further comprising one of the steps of: transmitting to said at least one receiver station	Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ...	Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...
at least one datum that one of designates one of a time and a channel of transmission of said mass medium programming and specifies one of the title of and the subject matter contained in said mass medium program;	Column 3 lines 6-8. Column 16 lines 32-41.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. For example, a person might instruct video cassette recorder, 135, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City. Recorder, 135, might receive the programming over Manhattan Cable TV channel 4 and record the programming from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each discrete bit of this information could be conveyed to recorder, 135, in a signal unit or units in the programming so received and recorded.	Page 14 line 35 to page 15 line 2. Page 319 line 30 to page 320 line 8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. For example, a subscriber might instruct video recorder/player, 217, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City. Recorder, 217, might receive the programming over Manhattan Cable TV channel 4 and record the programming at the time of original broadcast transmission--from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each discrete bit of this information could be transmitted to the subscriber station of Fig. 5 in meter-monitor information ... embedded in the transmitted programming.

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transmitting to said at least one receiver station	Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ...	Page 337 lines 1-8.	So embedding and transmitting said meter-monitor information would cause recorder, 217, to record said information. Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...
a first instruct signal to cause said receiver station to	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18. Page 267 lines 20-28 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...

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a specific one of a broadcast transmission and a cablecast transmission; and	Column 6 lines 30-41.	<p>The cable transmission is input simultaneously to switch 1 and mixer 2. The broadcast transmission is input to switch 1. Switch 1 and mixers 2 and 3 are all controlled by local oscillator and switch control 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer 3 which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.</p>	<p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>The cable transmission is inputted simultaneously to switch, 1, and mixer, 2. The broadcast transmission is inputted to switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.</p>
causing at least one of said at least one receiver station to cease combining a receiver specific datum with said mass medium programming at a specific time.	Column 20 lines 2-7.	<p>When the two studio generated graphics are no longer displayed, the studio stops sending the instruction signal, and the microcomputer, 205, ceases transmitting its own graphic to TV set, 202, and prepares to send the next locally generated graphic overlay upon instruction from the originating studio.</p>	<p>Page 439 lines 9-15.</p> <p>Page 29 lines 15-26.</p> <p>Page 26 line 33 to page 27 line 9.</p> <p>As the program proceeds, in the same fashion a further instruction signal is generated at said studio; transmitted; detected; inputted from decoder, 203, to microcomputer, 205; and executed as "GRAPHICS OFF." Then said studio ceases transmitting the graphic image, and transmits another image such as the host's talking head. Simultaneously, the GRAPHICS OFF command causes microcomputer, 205, to cease overlaying the graphic information onto the received composite video and to commence transmitting the received composite video transmission unmodified. Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.</p>
			<p>Page 451 line 22 to</p> <p>Furthermore, it is undesirable to separate</p>

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			page 452 line 5.	<p>computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synchronisms.</p>
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89. The method of claim 83, wherein said at least one of a code and a datum serves as evidence of both:	Column 18 lines 30-37.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,	Page 408 lines 18-29	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.
			Page 414 lines 13-27	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains

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		Page 15 lines 16-22	secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44. The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ... Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.
The processors, 204 and 210, transfer this information to signal processor, 200,		Page 36 lines 32-33. Page 38 lines 11-14.	... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.
		Page 411 lines 10-15	Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the
		Page 418 line 23 to page 419 line 15.	

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			audio program unit of said radio transmission.
for recording and subsequent transmission to a remote data collection site.		Page 411 line 28 to page 412 line 2.	In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in
		Page 173 line 30 to page 174 line 23 from example #3.	The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1 st monitor information (#3).")
		Page 419 lines 4-15.	In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.
		Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and

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				how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
(1) the passing of said at least one instruct signal to said controllable apparatus; and	Column 18 lines 14-19.	TV signal decoder, 203, detects signals in the programming transmission on the channel which signals it transfers to monitor or processor, 204. Monitor or processor, 204, determines that certain signals are addressed to switch, 212, and transfers these signals to switch, 212.	Page 408 lines 18-29.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of ... an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, ...
(2) the functioning of said controllable apparatus in response to said at least one instruct signal.	Column 18 lines 19-22.	These signals instruct switch, 212, to turn power on to radio, 209, and its associated equipment, including a conventional digital tuner, 213.	Page 408 lines 31-34. Page 410 lines 10-11.	Receiving said message causes said controller, 44, switch power on to ... radio, 209, ... Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.

90. A method of controlling a remote transmitter station to	Column 11 lines 39-43.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the	Page 328 lines 9-13.	... said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the
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<p>deliver a receiver specific output to a receiver station and controlling said receiver station to</p>	Column 10 lines 15-23.	programming.	<p>The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.</p>	Page 326 lines 28-30.	<p>... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.</p>
	Column 20 lines 27-37.	<p>Five minutes later,</p> <p>a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.</p> <p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,</p>	<p>Five minutes later,</p> <p>The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...</p>	Page 324 lines 8-24.	<p>The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...</p>
			<p>Five minutes later,</p> <p>a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.</p> <p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,</p>	Page 471 line 26 to page 472 line 17.	<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200.</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause an instance of ...</p>
		<p>instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form</p>		Page 476 line 34 to Page 477 line 8.	<p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said</p>

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		"Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.	
		In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....	Page 477 lines 8-17.
	and instruct control means, 226, to activate printer, 221.	... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...	Page 474 lines 3-7.
communicate at least one receiver specific datum to a remote data collection station,	Column 20 lines 54-58.	[Signal processor in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on	Page 28 lines 25-35.

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		that site can determine for billing purposes that the recipe was,		Page 44 lines 26-30.	... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...
				Page 471 lines 26-31.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,...
				Page 473 lines 3-8.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...
	first, ordered			Page 472 lines 23-27 with	Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
				Page 471 lines 14-16.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...
	and, second, delivered.			Page 473 line 29 to Page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion

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with said receiver station being remote from		Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Page 470 lines 1-3 and Page 470 lines 9-12.	described above. ...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...
	said remote data collection station comprising the steps of:	Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.	Page 470 lines 19-21. Page 33 lines 18-20. Page 273 lines 4-6. Page 273 lines 21-25.	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M. Controller, 20, has capacity for controlling the operation of all elements of the signal processor ... The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. ... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.
	(1) receiving at the remote transmitter station	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV

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at least one instruct signal which operates at the receiver station to	Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. FIGS. 3A, 3B, and 3C illustrate the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 324 lines 18-21.
	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.
	Column 20 lines 27-36.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,	Page 471 line 26 to page 472 line 17.
		instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded	Page 476 line 34 to page 477 line 8.
		demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...	
		Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.	
		The present invention employs signals embedded in programming.	
		Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. Receiving said message causes controller, 20, to load and execute said check-for- entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause an instance of ...	
		(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is	

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perform one of the functions of assembling and communicating receiver specific data to a remote data collection station;	<u>ONE OF:</u> Column 20 lines 42-46.	digital form ...	<p>entered at a local input, 225, is to embed said message in a particular second transmission of said that is different from the transmitting and to "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p> <p>... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p>
			Page 477 lines 8-17.
	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.		Page 472 lines 23-27.
			Page 473 line 29 to page 474 line 1.

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Claim Language	Reference	Language	Reference
Column 9 line 68 to column 10 line 2.	The controller, 20, instructs buffer/comparator, 14, what signals to discard and how to mark signals and assemble signal strings.	Buffer/comparator, 14, operates under control of controller, 20, ... Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter & monitor information from (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing information from clock, 18. When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion then discard all information of said record from its memory and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion. [Signal processor in Fig.7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for	Page 32 lines 20-21. Page 223 lines 22-33.
Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,		Page 224 lines 12-18.
			Page 28 lines 25-35.

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		Reference
	that site can determine for billing purposes that the recipe was,	<p>programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...</p>
		<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,...</p>
		<p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...</p>
first, ordered		<p>Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p>
		<p>Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...</p>
and, second, delivered.		<p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the</p>

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<p><u>OR</u> Column 20 lines 49-54.</p>	<p>Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received.</p>	<p>buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p> <p>At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.</p> <p>Buffer/comparator, 14, operates under control of controller, 20, ...</p> <p>Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter & monitor information (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing</p>	<p>Page 473 line 29 to page 474 line 1</p> <p>Page 314 line 30-33.</p> <p>Page 32 lines 20-21. Page 223 lines 22-33.</p>
<p>Column 9 line 68 to column 10 line 2.</p>	<p>The controller, 20, instructs buffer/comparator, 14, what signals to discard and how to mark signals and assemble signal strings.</p>		

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Claim Language	Reference	Language	Reference
		information from clock, 18.	
		When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion then discard all information of said record from its memory and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion.	Page 224 lines 12-18.
Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	[Signal processor in Fig.7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.	Page 28 lines 25-35.
	that site can determine for billing purposes that the recipe was,	... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...	Page 44 lines 26-30.
		Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,....	Page 471 lines 26-31.

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Claim Language	Reference	Language	Reference
			<p>Page 473 lines 3-8.</p> <p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...</p> <p>Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p> <p>Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567# ...</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p>
<p>first, ordered</p> <p>and, second, delivered.</p>			<p>Page 472 lines 23-27 with</p> <p>Page 471 lines 14-16.</p> <p>Page 473 line 29 to Page 474 line 1.</p>
<p>(2) receiving a control signal which operates at the remote transmitter station to control the communication of at least one instruct signal, and</p>	<p>ONE OF: Column 11 lines 38-39.</p>	<p>By comparing identification signals on the incoming programming ...</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information</p>

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			Page 84 lines 26-28.	with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 28 lines 26-27.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...
			Page 49 lines 26-27.	... monitor information that identifies what programming is available , ...
			Page 328 lines 9-13.	Meter-monitor segments contain meter information and/or monitor information.
	<p><u>OR</u></p> <p>Column 11 lines 39-43.</p>	<p>... the programing schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>		... said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
communicating said control signal to said remote transmitter station;	Column 11 lines 39-41.	<p>... the programing schedule received earlier from local input, 74, and/or from a remote site via network, 98, ...</p>	<p>Page 326 lines 28-30.</p> <p>Page 328 lines 9-10.</p> <p>Page 326 lines 28-30.</p>	<p>... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.</p> <p>... with information of the programming schedule, received earlier from input, 74, and/or network, 98, ...</p> <p>... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.</p>
	<u>FOR BOTH:</u>			

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<p>Column 19 line 67 to column 20 line 2.</p> <p>AND</p> <p>Column 11 lines 50-57.</p>	<p>The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p> <p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>	<p>Page 26 lines 8-11.</p> <p>Page 328 line 22 to page 329 line 1.</p>
<p>(3) monitoring a use of at least one of</p>	<p>Column 12 lines 45-50.</p>	<p>Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93.</p>	<p>Page 337 lines 1-12.</p> <p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field</p>

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said control signal and	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.
a resource which responds to said control signal;	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to	Page 327 line 35 to page 328 line 13. Page 84 lines 26-28. Page 28 lines 26-27. Page 49 lines 26-27. Page 328 line 22 to page 329 line 1.
		<p>distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that</p>	

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		transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	
(4) storing a record of the use of at least one of	Column 12 lines 45-50.		Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5.
said control signal and	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor
		said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.	

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<p>a resource which responds to said control signal from said step of monitoring;</p>	<p>Column 11 lines 50-57.</p>	<p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
			<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p>
			<p>... monitor information that identifies what programming is available, ...</p>
			<p>Meter-monitor segments contain meter information and/or monitor information.</p>
			<p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular programmed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>

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(5) receiving one of a code and	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.
a datum	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ... Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 lines 27-29.
designating a specific instruct signal to be transmitted by the remote transmitter station, and said remote transmitter station	<u>ONE OF:</u> Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 14 line 35 to page 15 line 2. Page 327 line 35 to page 328 line 13.
		Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74,	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ... Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74,

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	Language	
	and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ...	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 471 line 26 to page 472 line 17.</p>
<p><u>OR</u></p> <p>Column 20 lines 27-36.</p>	<p>Five minutes later,</p> <p>a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.</p> <p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,</p>	<p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200.</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory and to cause an instance of ...</p>
<p>instruct tuner, 223, to tune cable converter box, 222, to the appropriate</p>		<p>Page 476 line 34 to page 477 line 8.</p> <p>(An alternate method for inputting said second message to the microcomputers, 205,</p>

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transferring said designated specific instruct signal to a transmitter; and	Column 11 lines 50-57.	channel to receive the recipe in encoded digital form ...	<p>at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission of said that is different from the transmitting and to "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission as to transfer the programming transmission inputted (via distribution amplifier, 63) to</p>
			<p>Page 477 lines 8-17.</p> <p>Page 328 line 22 to page 329 line 1.</p>
		... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	

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	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.
(6) transmitting from said remote transmitter station an information transmission comprising	Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ...	Page 337 lines 1-8.
at least one designated instruct signal, said at least one designated instruct signal being transmitted	<u>ONE OF:</u> Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.
		matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. The present invention employs signals embedded in programming. Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ... Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate	

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<p>at at least one specific time and on at least one specific channel</p>	<p><u>OR</u> Column 8 lines 20-27.</p>	<p>The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.</p>	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 33 lines 7-20.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>transmission stations and embedded in television or radio or other programming transmissions ...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>

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in accordance with said control signal.	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.
		Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	
		SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ...	Page 84 lines 26-28. Page 28 lines 26-27.
		Meter-monitor segments contain meter information and/or monitor information.	Page 49 lines 26-27.
91. The method of claim 90, wherein at least one receiver specific data evidence one of the availability and use of information, and	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	Page 28 lines 25-35.

[Signal processor in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It

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		that site can determine for billing purposes that the recipe was,		has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.	
				... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...	
				Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,...	
				One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...	
		first, ordered		Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.	
		and, second, delivered.		Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...	
				Receiving said message causes the controller, 39, of decoder, 203, to load and execute said	

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a receiver specific response	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,		Page 28 lines 25-35.	generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
					[Signal processor in Fig.7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
		that site can determine for billing purposes that the recipe was,		Page 44 lines 26-30.	... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...
				Page 471 lines 26-31.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,....
				Page 473 lines 3-8.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message

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to said at least one designated instruct signal.		first, ordered		Page 472 lines 23-27 with	that consists of ... meter-monitor information including ... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information. Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567# ... Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above. ... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information. Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, ...
	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...		Page 472 lines 15-17.	
	Column 20 lines 42-45.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer ...		Page 472 lines 23-27.	
	Column 20 lines 31.	This signal instructs buffer/comparator, 8, ...		Page 472 lines 13-15.	

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<p>92. The method of claim 90, wherein said at least one designated instruct signal comprises downloadable code.</p>	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
	Column 20 lines 37-42.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200,	Page 477 lines 8-23.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...
			Page 281 lines 1-6.	By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")
		which, in a predetermined fashion, signal processor, 200, decrypts and transfers	Page 282 line 2 to page 283 line 33.	... the information of said segments is encrypted prior to transmission ... The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ... Executing said information causes control

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		to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.	Page 478 lines 1-5.	processor, 39J, ... to locate the location of that particular instance of controlled-function-involving information that is "100110" ... and modify the information at said location to be "111111". (Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
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93. A method for promoting and delivering at least one of a	Column 20 lines 16-23.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program. Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."	Page 470 lines 1-3 and Page 470 lines 9-13.	... transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is retransmitted by the intermediate station of Fig. 6; ...
			Page 470 lines 19-21.	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
			Page 471 lines 6-13.	Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#".

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	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 473 lines 3-13.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe-... instructions selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission.... ... causes ... said decoder, 290, to detect and process properly the information of said second message.
			Page 477 lines 12-17.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
			Page 478 lines 1-5.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.
			Page 475 lines 1-2.	... your own printed copy ...
product,	Column 20 line 21.	... a printed copy ...	Page 471 line 8.	(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said
service, and a	Column 20 lines 33-36.	... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	Page 476 line 34 to page 477 line 8.	

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decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.			
In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....			
media output for use with an interactive television viewing apparatus comprising the steps of:	<p>Column 20 line 11.</p> <p>Column 17 lines 47-53.</p>	<p>Coordinating Print and Video</p> <p>FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.</p>	<p>Page 477 lines 8-17.</p> <p>See generally page 469 line 1 to page 516 line 13. (Page 469 lines 1-2 quoted herein.)</p> <p>Page 390 lines 30-35.</p> <p>Page 396 lines 8-10.</p>
displaying a television program that promotes at least one of a	Column 20 lines 16-23.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program. Halfway through the program, the host says, "If you are interested in cooking what we are	<p>Automating U. R. Stations ... Examples #9 and # 10 Continued</p> <p>Coordinating Computers, Television, and Print</p> <p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.</p> <p>Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.</p> <p>...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."</p> <p>At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate</p>

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product, a service, and a	Column 20 line 21. Column 20 lines 33-36.	<p>preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."</p> <p>... a printed copy ...</p> <p>... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...</p>	<p>Page 470 lines 19-21.</p> <p>Page 471 lines 6-13.</p> <p>Page 471 line 8.</p> <p>Page 476 line 34 to page 477 line 8.</p> <p>Page 477 lines 8-17.</p>	<p>station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is retransmitted by the intermediate station of Fig. 6; ...</p> <p>... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.</p> <p>Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#".</p> <p>... your own printed copy ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said</p>

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media output, said interactive television viewing apparatus having an input device to receive input from a viewer;	Column 20 line 11.	Coordinating Print and Video	See generally page 469 line 1 to page 516 line 13. (Page 469 lines 1-2 quoted herein.)
prompting said viewer during said television program whether said viewer wants said at least one of a product, a service, and a media output prompted in said step of displaying, said interactive television viewing apparatus having an output device for outputting at least one of said product, said service, and	Column 20 lines 19-23. Column 20 lines 48-49. Column 20 line 21. Column 20 lines 33-36.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."	Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Receiving said output information causes printer, 221, to print the information of said specific recipe and list. ... your own printed copy ... (An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said

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said media output;	Column 20 lines 12-15.	FIG 6D illustrates one method for coordinating the presentation of information through the use of print with video. FIG 6D also illustrates possible uses of a decrypter and a local input.	Page 477 lines 8-17. In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission.... Fig. 7F illustrates a method for generating and communicating information to selected subscribers through the coordination of computers, television, and broadcast print. Fig. 7F also illustrates use of a local input, 225.
			(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above—for example, in the method of the first message of example #4.)
			Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
receiving a reply from said viewer at said input device in response to said step of prompting said viewer, said interactive television viewing apparatus having a	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.

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processor for processing said viewer reply to perform at least one of the functions of	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.
	Column 20 lines 26-27.	... to hold and process further in a predetermined fashion.	Page 471 lines 22-25.
	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.
obtaining and	Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.
enabling instructions which perform at least one of the functions of	Column 7 lines 39-47.	In a pre-determined fashion, buffer/comparator, 8, identifies signal words and/or signal units that must be decrypted, either in whole or in part, and passes identified signal words and/or units to decrypter, 10. Decrypter, 10, uses conventional decrypter techniques, well known in the art, in a pre-determined fashion to decrypt such signals as required. Decrypter, 10, then passes the decrypted signals to processor or monitor, 12.	Page 30 lines 21-26. Page 30 lines 31-35.
		... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ... Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory. Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station. Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12. In a fashion described more fully below, buffer/comparator, 8, and a controller, 20, which, too, is described more fully below, determine whether signal processor, 26, is enabled to decrypt said information. If signal processor, 26, is so enabled, buffer/comparator, 8, transfers said information to decryptor, 10. Decryptor, 10, is a standard digital information decryptor, well known in the art, that ... uses conventional decryptor techniques, well known in the art, to decrypt said signals as required.	

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	Column 13 lines 37-39.	... to instruct signal processor, 100, that the site wants to be enabled to receive the programming.	Page 30 line 35 to page 31 line 1. Page 289 lines 22-33.
providing and	Column 20 lines 33-36.	... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	Page 476 line 34 to page 477 line 8.
		Decryptor, 10, transfers decrypted signals to controller, 12. In example #7, the controller, 20, of the signal processor, 200, of Fig. 4 is preprogrammed at a particular time with particular information that indicates that the subscriber of said station wishes to view said "Wall Street Week" program when transmission of said program on cable cable 13 commences. (So preprogramming controller, 20, can occur in several fashions. For example, prior to a particular time, a subscriber may enter particular please-fully-enable-WSW-on-CC13-at-particular-8:30 information at local input, 225, and cause said information, in a predetermined fashion, to be inputted to controller, 20, by local input, 225. (An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station. In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming	

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controlling output of said at least one of a product, a service, and a media output in response to said instructions;	Column 20 lines 37-42.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200,	Page 477 lines 8-23.	communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....	
			Page 281 lines 1-6.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...	
		which, in a predetermined fashion, signal processor, 200, decrypts and transfers	Page 282 line 2 to page 283 line 33.	By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called " covert control. ")	
<p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of</p>					

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					controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".
					(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
delivering said instructions at said interactive television viewing apparatus in response to said step of receiving a reply,				Page 478 lines 1-5.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
					controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
					(At stations where TV567# information does not exist at last-local-input-# memory of the controllers, 20, said instructions cause said controllers, 20, to cease executing and delete all information of said instructions without placing any information at the decoders, 145 and 203, ...
said instructions controlling said interactive television viewing apparatus in performing a technique for delivering said at least one of a product, a service, and a media output;					Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both.
processing said instructions from said					Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10;

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step of delivering;		and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a predetermined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.		analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.	
performing said technique at said interactive television viewing apparatus, said processor delivering	Column 20 lines 31-37.	This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form and instruct control means, 226, to activate printer, 221.	Page 471 line 26 to page 472 line 17. Page 476 line 34 to page 477 line 8.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ... (An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said	

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		second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.	
		In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...	Page 477 lines 8-17.
		... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...	Page 474 lines 3-7.
	Column 20 lines 37-42.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...	Page 477 lines 8-23.
	The signal transmission from processor, 204, also passes a signal word to signal processor, 200,	By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations.	Page 281 lines 1-6.

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		which, in a predetermined fashion, signal processor, 200, decrypts and transfers	Page 282 line 2 to page 283 line 33.
			<p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".</p>
		to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.	Page 478 lines 1-5.
			(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
said at least one of a product, a service, and a media output on the basis of said instructions;	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	<p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe... instructions ...</p> <p>... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive</p>

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monitoring use of at least one of said instructions and			said transmission.... ... causes ... said decoder, 290, to detect and process properly the information of said second message. (Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.) Receiving said output information causes printer, 221, to print the information of said specific recipe and list.
			Page 477 lines 23-29. Page 478 lines 1-5. Page 475 lines 1-2.
			Page 13 lines 25-32.
			Page 31 lines 10-22.
	Column 4 lines 5-13. Column 7 lines 50-60.	These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, , that they can convey signals to equipment that must switch manners or modes of operation during transmissions of individual units of programming, and that they can be monitored. Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be	The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. They occur at precise times in programming and can synchronize the operation of receiver station apparatus to the timing of programming transmissions. They can be conveniently monitored. Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter

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	processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.	
Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.	...Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.	Page 472 lines 23-27.
		Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.	Page 473 line 29 to page 474 line 1.
a resource which outputs at least a portion of said at least one of a product, a service, and a media output; and	Column 15 lines 27-30.	Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing ...	Page 312 line 33 to page 313 line 8.
		[Signal processor 200 in Fig. 7 and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining	Page 28 lines 25-29.

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	Column 20 lines 49-54.	Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received.	<p>monitor records that document said availability and usage.</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p> <p>At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.</p>
storing a record of said use of said at least one of said instructions and	Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.	<p>Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...</p> <p>...Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p>
	Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.	<p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the</p>

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said resource from said step of monitoring.	Column 20 lines 49-54.	Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received.	Page 473 line 29 to page 474 line 1
		buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above. Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above. At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.	Page 314 line 30-33.
94. The method of claim 93, wherein at least one of said instructions is embedded in the non-visible portion of a television signal.	Column 20 lines 27-31.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 ...	Page 471 line 26 to page 472 line 17.
		Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200.... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes	

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	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	controller, 20, to determine that TV567# information exists at said last-local-input-# memory ... A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
			Page 25 line 34 to page 26 line 1.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
	Column 4 lines 18-22.	In television they may appear on one line in the video portion of the transmission, or on a portion of one line, or on more than one line, and will probably lie outside the range of the television picture displayed on a normally tuned television set.	Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 14 lines 6-11.	In television they may appear on one line in the video portion of the transmission such as line 20 of the vertical interval, or on a portion of one line, or on more than one line, and they will probably lie outside the range of the television picture displayed on a normally tuned television set.

95. The method of claim 93, wherein information evidencing one of said technique, and	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	Page 28 lines 25-35.	[Signal processor in Fig.7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity
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		for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.	
that site can determine for billing purposes that the recipe was,		... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...	Page 44 lines 26-30.
		Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,....	Page 471 lines 26-31.
		One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...	Page 473 lines 3-8.
first, ordered		Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.	Page 472 lines 23-27 with
		Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...	Page 471 lines 14-16.

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the availability and use of said television program, is one of stored and communicated to a remote data collection station, said method further comprising the step of selecting evidence information that one of identifies and designates at least one:	Column 18 lines 30-41.	and, second, delivered.	Page 473 line 29 to Page 474 line 1.
	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.	
		Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.	Page 408 lines 18-29
		Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.	Page 414 lines 13-27
		The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...	Page 15 lines 16-22
	The processors, 204 and 210, transfer this	Each decoder is controlled by a controller, 39,	Page 36 lines 32-33.

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	information to signal processor, 200,		Page 38 lines 11-14. Page 411 lines 10-15 Page 418 line 23 to page 419 line 15. Page 411 line 28 to page 412 line 2. Page 173 line 30 to page 174 line 23 from example #3.	<p>44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control</p>
	for recording and subsequent transmission to a remote data collection site.			

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(1) mass medium program;			processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1 st monitor information (#3).")		
			In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.	Page 419 lines 4-15.	
		Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.		Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
				Page 397 lines 17-20.	Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...
(1) mass medium program;	Column 15 lines 62-63.	[The signals for which the decoders are monitoring] may convey unique identifier		Page 49 lines 26-28.	Meter-monitor segments contain meter information and/or monitor information.

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		Column 16 lines 32-35.	codes for each program or commercial. For example, a person might instruct video cassette recorder, 135, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.	Page 50 lines 6-7. Page 319 lines 30-33.	Examples of categories of such information include: ...unique identifier codes for each program unit (including commercials);.... For example, a subscriber might instruct video recorder/player, 217, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.
(2)	use of programming;	Column 18 lines 30-35.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...	Page 408 lines 18-29	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.
(3)	transmission station;	Column 15 lines 60-62.	[The signals for which the decoders are monitoring] may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Page 49 lines 26-28. Page 50 lines 1-4.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... origins of transmissions (eg., network so source stations, broadcast stations, cable head end stations); dates and times ...
(4)	receiver station;	Column 16 lines 56-61.	... and, in a predetermined fashion, create a signal string	Page 180 lines 1-3. Page 297 line 15. Page 180 lines 4-15.	Then said process-monitor-info instructions cause onboard controller, 14A, to initiate a new monitor record that reflects the new "Wall Street Week" programming. ...creating a meter record that records the decryption.... Automatically, said instructions cause onboard controller, 14A, in a predetermined

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		received signal which information might	fashion, to delete ... except the source mark information associated with said record; to record information of said first named instance of "program unit identification code" information (which is the "program unit identification code" of said "Wall Street Week" program to a particular "program unit identification code" location at said record location; to select particular information located at said SPAM-input-signal-@14A register memory and record information at said record location; to select particular preprogrammed record.... In a predetermined fashion, onboard controller, 14A, also records in a particular monitor record field location at said record location a particular display unit identification code that identifies monitor, 202M, as the display apparatus of said new monitor record. In a predetermined fashion, signal processor, 200, records date and time information received from clock, 18, in first and last particular time field...
		identify the individual decoder, 131, 136, 138, 143, 145, 147, 149, or 150 and the time of receipt at signal processor, 130.	Page 181 lines 8-14.
(5) network;	Column 16 lines 32-35.	For example, a person might instruct video cassette recorder, 135, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.	Page 319 lines 30-33.
	Column 16 lines 39-41.	Each discrete bit of this information could be conveyed to recorder, 135, in a signal unit or units in the programming so received and recorded.	Page 320 lines 2-8.
(6) broadcast station;	Column 15 lines 60-62.	[The signals for which the decoders are monitoring] may identify networks, broadcast stations, channels on cable	Page 49 lines 26-28.
			Each discrete bit of this information could be transmitted to the subscriber station of Fig. 5 in meter-monitor information ... embedded in the transmitted programming. So embedding and transmitting said meter-monitor information would cause recorder, 217, to record said information. Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information

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			systems, and possibly times of transmission.	Page 50 lines 1-4.	include: ... origins of transmissions (eg., network so source stations, broadcast stations, cable head end stations); dates and times ...
(7) channel on a cable system;	Column 16 lines 35-41.	Recorder, 135, might receive the programming over Manhattan Cable TV channel 4 and record the programming from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each discrete bit of this information could be conveyed to recorder, 135, in a signal unit or units in the programming so received and recorded.	Recorder, 217, might receive the programming over Manhattan Cable TV channel 4 and record the programming at the time of original broadcast transmission--from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each discrete bit of this information could be transmitted to the subscriber station of Fig. 5 in meter-monitor information ... So embedding and transmitting said meter-monitor information would cause recorder, 217, to record said information.	Page 319 line 33 to page 320 line 8.	
(8) time of transmission;	Column 15 lines 60-62.	[The signals for which the decoders are monitoring] may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... origins of transmissions (eg., network so source stations, broadcast stations, cable head end stations); dates and times ...	Page 49 lines 26-28. Page 50 lines 1-4.	
(9) unique identifier datum;	Column 15 lines 62-63.	[The signals for which the decoders are monitoring] may convey unique identifier codes for each program or commercial.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique identifier codes for each program unit (including commercials);....	Page 49 lines 26-28. Page 50 lines 6-7.	
(10) supplier of data;	Column 15 lines 63-65.	In the case of data transmitted to the micro-computer, [the signals for which the decoders are monitoring] may be unique codes that identify the source and suppliers of the data.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ...	Page 49 lines 26-28.	

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		... unique codes that identify the sources and suppliers of computer data.	Page 50 lines 19-20.
(11) distributor or advertisement; and	Column 15 lines 63-65. Column 15 lines 65-68.	<p>In the case of data transmitted to the micro-computer, [the signals for which the decoders are monitoring] may be unique codes that identify the source and suppliers of the data.</p> <p>In the case of data received at the printer, [the signals for which the decoders are monitoring] may identify publications, articles, publishers, distributors, advertisements, etc.</p>	<p>Page 49 lines 26-28.</p> <p>Page 50 lines 19-20.</p> <p>Page 321 lines 1-6.</p> <p>Page 360 lines 31-34.</p> <p>Page 496 lines 12-13.</p> <p>Page 496 lines 28-35.</p>
		<p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ...</p> <p>... unique codes that identify the sources and suppliers of computer data.</p> <p>Prerecorded, commercially distributed video and audio tapes, videodiscs, so-called "compact discs" of audio, and so-called "CD ROM" discs of data can also contain unique codes, embedded in the prerecorded programming, that identify the use and usage of said programming when said tapes or discs are played. For example, laser disc player, 232, can</p> <p>For example, another of the aforementioned discounts and cents-off coupon specials is of a particular product ... that is advertised ...</p> <p>At printer, 221, the printed so-called "hard copy" of said offer and coupon information emerges as:</p> <p>.....</p> <p>15 cents off 15 cents off</p> <p>Nabisco Zweiback Teething Toast</p> <p>.....</p>	
(12) indication of a payment obligation.	Column 15 lines 65-68.	In the case of data received at the printer, [the signals for which the decoders are	Page 321 lines 1-6.
		Prerecorded, commercially distributed video and audio tapes, videodiscs, so-called	

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Reference		Language		Reference		
Language		Language		Language		
		monitoring] may identify publications, articles, publishers, distributors, advertise ments, etc.		<p>"compact discs" of audio, and so-called "CD ROM" discs of data can also contain unique codes, embedded in the prerecorded programming, that identify the use and usage of said programming when said tapes or discs are played. For example, laser disc player, 232, can</p> <p>For example, another of the aforementioned discounts and cents- off coupon specials is of a particular product ... that is advertised ...</p> <p>At printer, 221, the printed so-called "hard copy" of said offer and coupon information emerges as:</p> <p>.....</p> <p>..... 15 cents off</p> <p>..... Nabisco Zweiback Teething Toast</p> <p>.....</p> <p>.....</p>	<p>Page 360 lines 31-34.</p> <p>Page 496 lines 12-13.</p> <p>Page 496 lines 28-35.</p>	
96. The method of claim 93, wherein said instructions incorporate downloadable code, said method further comprising the steps of: communicating said downloadable code to said processor; and	Column 7 lines 39-49.	In a pre-determined fashion, buffer/comparator, 8, identifies signal words and/or signal units that must be decrypted, either in whole or in part, and passes identified signal words and/or units to decrypter, 10. Decrypter, 10, uses conventional decrypter techniques, well known in the art, in a pre-determined fashion to decrypt such signals as required. Decrypter, 10, then passes the decrypted signals to processor or monitor, 12. Buffer/comparator, 8, passes signal words and units not identified as requiring	Page 30 lines 21-26.	<p>In a fashion described more fully below, buffer/comparator, 8, and a controller, 20, which, too, is described more fully below, determine whether signal processor, 26, is enabled to decrypt said information. If signal processor, 26, is so enabled, buffer/comparator, 8, transfers said information to decryptor, 10.</p> <p>Decryptor, 10, is a standard digital information decryptor, well known in the art, that ... uses conventional decryptor techniques, well known in the art, to decrypt</p>	<p>Page 30 line 31 to page 31 line 1.</p>	

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		decryption directly to processor or monitor, 12.	said signals as required. Decryptor, 10, transfers decrypted signals to controller, 12.
Column 3 lines 3-8.		The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
Column 2 lines 63-66.		(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
receiving, on the basis of said downloadable code, a signal containing a portion of said television program.	Column 7 lines 50-54. Column 20 lines 27-32.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, ...	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller,

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				20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV 567# information exists at said last-local-input-# memory ...
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97. The method of claim 93, wherein said interactive television viewing apparatus includes a storage device, said method further comprising the step of:	See Figs. 1 and 6F&G.		See Figs. 2 and 7.	
embedding one of a code and a datum	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33. Page 25 line 34 to page 26 line 1. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and page 20-28, page 89 lines 3-6, and page 90 lines 4-11.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ... In this alternate method, ... said first SPAM
	Column 20 lines 37-42.	The signal transmission from processor,	Page 477 lines 8-23.	

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Claim Language	Reference	Language	Reference
204, also passes a signal word to signal processor, 200,		message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular control information that is in said instruction- control information to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...	
		By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called " covert control .")	Page 281 lines 1-6.
which, in a predetermined fashion, signal processor, 200, decrypts and transfers		... the information of said segments is encrypted prior to transmission ... The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ... Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".	Page 282 line 2 to page 283 line 33.
to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.		(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any	Page 478 lines 1-5.

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in said television program that	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.
	Column 20 lines 27- 31.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 ...	Page 471 line 26 to page 472 line 17.
enables said interactive television viewing apparatus to	Column 20 lines 45-46.	... and all necessary equipment was enabled.	Page 473 line 29 to page 474 line 1.
control a presentation	Column 20 lines 46-49.	When the transmission of the recipe is	Page 473 lines 3-13.
		of the methods described above--for example, in the method of the first message of example #4.)	
		Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	
		Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...	
		At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...	
		Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...	
		Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.	
		One minute later, said program originating	

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of at least one of said product, service, and said media output in accordance with said instructions.		received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 477 lines 12-17.	studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe... instructions selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission.... ... causes ... said decoder, 290, to detect and process properly the information of said second message. (Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.) Receiving said output information causes printer, 221, to print the information of said specific recipe and list.
			Page 477 lines 23-29.	
			Page 478 lines 1-5.	
			Page 475 lines 1-2.	

98. The method of claim 93, comprising the step of: programming said interactive television viewing apparatus to query a remote data source.	Column 18 lines 46-48.	... microprocessor, 205, is programmed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.
	Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing	Page 449 lines 13-35.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data

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		stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.		applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
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99. The method of claim 93, further comprising the steps of: storing a subscriber instruction to receive at least one of	Column 18 lines 46-48.	... microprocessor, 205, is programed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.
a specific mass medium program,	Column 20 lines 26-27.	... to hold and process further in a predetermined fashion.	Page 471 lines 22-25.	Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined

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Claim Language	Reference	Language	Reference
	<p>Column 20 lines 19-26.</p> <p>Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further ...</p>	<p>fashion, to retain said TV567# information at particular last-local-input-# memory.</p> <p>Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.</p> <p>Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.</p>	<p>Page 471 lines 6-25.</p>
datum,	<p>Column 18 lines 56-58.</p> <p>... signal processor, 200, to hold examples of the sought for unique signals in its buffer/ comparator, 8, and compare them with all incoming signals.</p>	<p>The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information that includes identification information of the particular stocks in said portfolio ...</p> <p>One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T".</p>	<p>Page 420 lines 6-20.</p>

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news item, and a	Column 18 lines 48-55.	<p>...said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information....</p> <p>Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions.</p> <p>The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.</p> <p>Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit- News-Item SPAM message ...</p> <p>In due course, said remote news-service-A station ...</p>	<p>Page 422 lines 33 to Page 423 line 4.</p> <p>Page 420 line 21 to page 421 line 7.</p>
computer control instruction; and	Column 19 lines 5-9.	<p>Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200. The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.</p> <p>... microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast. Microcomputer, 205, is preinformed of the time of cablecasting.</p>	<p>Page 428 lines 21-26.</p> <p>Page 437 lines 1-3.</p>
receiving at least one	Column 20 lines 46-49.	When the transmission of the recipe is	Page 473 lines 3-13.
		One minute later, said program originating	

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of a specific mass medium program,		received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe-... instructions selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission.... ... causes ... said decoder, 290, to detect and process properly the information of said second message. (Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.) Receiving said output information causes printer, 221, to print the information of said specific recipe and list. A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ...
			Page 477 lines 12-17.
			Page 477 lines 23-29.
			Page 478 lines 1-5.
			Page 475 lines 1-2.
			Page 59 lines 29-31.
datum,	Column 8 lines 58-65.	Control signals can be passed to the apparatus by means of the programming transmissions input at switch, 1, and mixer, 2. An example of such a control signal is an instruction for the apparatus to contact a remote telephone unit. The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines.	Page 290 lines 26-31.

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		In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...	Page 291 lines 21-24.
		The next day, February 28, 1988 at 2:32 AM, receiving particular time information from said clock, 18, causes said controller, 20, again to cause said switch, 1, and said mixer, 3, to input the transmission of said master channel to said decoder, 30, and to cause said decoder, 30, to commence processing to detect a SPAM end of file signal.	Page 402 lines 21-26.
		Said message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30. Receiving said message causes said controller, 39, to transmit said Read-Meters-of-Selected-Station SPAM message to the controller, 20, of the signal processor, 200, of said station.	Page 403 lines 7-12.
		Executing said ones causes controller, 20, to transmit the current reading information of utilities meter, 262, to a remote metering station computer and cause said computer to process said information. Automatically, controller, 20, ... activates telephone connection, 22; inputs a particular telephone number ...	Page 405 lines 20-29.
		Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 ...	For example, page 531 lines 17-22.
news item, and a	Column 19 lines 35-37.	Each weekday, microcomputer, 205,	Page 449 lines 13-26.

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computer control instruction in accordance with said instruction.	Column 19 lines 45-49.	receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
		When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
		several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
			In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...

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			Page 451 lines 7-9.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...
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100. The method of claim 93, further comprising the steps of: programming said processor to	Column 8 lines 20-27.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.	Page 33 lines 7-20.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has a capacity for controlling the operation of all elements of the signal processor ...
respond to information communicated from	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...
one of data and	Column 9 lines 21-23.	[The Controller, 20] is interactive with external sources via telephone connection, 22, and ...	Page 273 lines 6-19.	Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a particular instruct-to- receive signal. Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.
		... can be reprogramed from such remote	Page 537 lines 6-17.	At 3:10 AM, GMT, said European master

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	sources.	<p><i>network station</i> transmits particular SPAM message information, embedded in the information of said master transmission, including a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain operating system instructions. In so doing, said European master network station inputs operating system instructions to all SPAM apparatus and receiver station computers, 73, and microcomputers, 205, thereby causing said apparatus and computers, 73 and 205, as described above in "PREPROGRAMMING RECEIVER STATION OPERATING SYSTEMS," to commence operating under control of the instructions of said operating systems.</p>
a programming source;	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.</p>	<p>...particular information of said TELEPHON.EXE module that causes ... signal processor, 200, to transmit the information ... via telephone network in the fashion of example #10, to a computer at a particular remote data collection station.</p> <p>Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each farmer expects to harvest during the 2027 growing season. Automatically, the received data is aggregated, in a fashion well known in the art, at the computer of said <i>European master network</i> origination and control station ...</p> <p>Then, at 3:59 PM, on Thursday, February 18, 2027, the cycle of generating and communicating information of farmers is repeated ...</p>
Column 19 lines 60-63.		<p>with respect to page 555 line 24 to page 556 line 14.</p>
Page 59 lines 29-33.		<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The</p>

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				information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...	
receiving an information transmission from one of a local storage device and				Page 25 line 34 to page 26 line 1. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	
a remote television programming source;				Page 320 lines 24-26. Page 470 lines 1-3 and Page 470 lines 9-12.	
		Column 16 lines 43-45. Column 20 lines 16-19.	Subsequently, the person might play the recorded programming on TV set, 132, from 10:45 PM to 11:15 PM the same evening. Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	... transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.	
		Column 18 lines 48-51.	Several separate news services transmit	Page 420 lines 21-29.	Two remote stations--remote news-service-A

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			news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.		station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions. The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.
inputting at least some of said received information transmission to a control signal detector;	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...	
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.	
detecting one of data and an instruct signal in said information transmission; and	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.	
	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	
	Column 20 lines 31.	This signal instructs buffer/comparator, 8, ...	Page 472 lines 13-15.	Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, ...	
passing one of said detected data and said instruct signal to said processor.	Column 20 lines 27- 31.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...	

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		...		<p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p>
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<p>101. The method of claim 93, further comprising the steps of: storing a subscriber instruction to perform one of the functions of</p>	Column 20 lines 26-27.	... to hold and process further in a predetermined fashion.	Page 471 lines 22-25.	<p>Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.</p>
	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	<p>Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.</p>
	Column 20 lines 27-33.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator,	Page 471 line 26 to page 472 line 17.	<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said</p>

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presenting at least one of a mass medium program,	Column 20 lines 46-49.	225, signal processor, 200, should, ...	Page 473 lines 3-13.	message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory and to cause ...
		When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 477 lines 12-17.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe... instructions selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission.... ... causes ... said decoder, 290, to detect and process properly the information of said second message.
			Page 477 lines 23-29.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
			Page 478 lines 1-5.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.
			Page 475 lines 1-2.	

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datum, and	Column 20 lines 42-45.	Page 472 lines 23-27.	... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
a computer control instruction; and	Column 7 lines 39-49.	Page 30 lines 21-26.	In a fashion described more fully below, buffer/comparator, 8, and a controller, 20, which, too, is described more fully below, determine whether signal processor, 26, is enabled to decrypt said information. If signal processor, 26, is so enabled, buffer/comparator, 8, transfers said information to decryptor, 10.
		Page 30 line 31 to page 31 line 1.	Decryptor, 10, is a standard digital information decryptor, well known in the art, that ... uses conventional decryptor techniques, well known in the art, to decrypt said signals as required. Decryptor, 10, transfers decrypted signals to controller, 12.
		Page 30 lines 29-30.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
performing one of the functions of processing and	Column 20 lines 27-33.	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller,

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	Column 7 lines 50-60.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 31 lines 10-22.
presenting at least one specific mass medium program,	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 473 lines 3-13.
		20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause ... Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe ... instructions selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission.... ... causes ... said decoder, 290, to detect and process properly the information of said second message.

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datum,		(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)	Page 478 lines 1-5.
	Column 20 lines 54-58.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.	Page 475 lines 1-2.
		[Signal processor in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.	Page 28 lines 25-35.
		... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...	Page 44 lines 26-30.
	that site can determine for billing purposes that the recipe was,	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,...	Page 471 lines 26-31.
		One minute later, said program originating studio embeds in the transmission of said	Page 473 lines 3-8.

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or computer control instruction in accordance with said instruction.	Column 20 lines 31-36.	<p>first, ordered</p> <p>and, second, delivered.</p> <p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...</p>	<p>Page 472 lines 23-27 with</p> <p>Page 471 lines 14-16.</p> <p>Page 473 line 29 to Page 474 line 1.</p> <p>Page 471 line 26 to page 472 line 17.</p>	<p>"Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...</p> <p>Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p> <p>Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-</p>

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			<p>entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p>
			<p>Page 476 line 34 to page 477 line 8.</p> <p>Page 477 lines 8-17.</p>

102. The method of claim 93, wherein said interactive television viewing apparatus has a plurality of output devices and at least one of said product, service,	See Figs. 1 and 6F&G.		See Figs. 2 and 7.	
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and media output is delivered at a specific at least one of said plurality of output devices, said method further comprising the steps of:	Column 20 lines 46-49.	<p>When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.</p> <p>Page 473 lines 3-13.</p> <p>Page 477 lines 12-17.</p> <p>Page 477 lines 23-29.</p> <p>Page 478 lines 1-5.</p> <p>Page 475 lines 1-2.</p>	<p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe... instructions ...</p> <p>... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....</p> <p>... causes ... said decoder, 290, to detect and process properly the information of said second message.</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p> <p>Receiving said output information causes printer, 221, to print the information of said specific recipe and list.</p>
controlling a selective transmission device to communicate one of data and instructions in respect of at least one of said product, service, and media output to said specific at least one of said plurality of output devices; and	Column 7 lines 50-60.	<p>Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate</p> <p>Page 31 lines 10-22.</p>	<p>Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for</p>

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<p>external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.</p>	<p>jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.</p>	<p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...</p> <p>By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")</p> <p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of</p>	<p>Page 477 lines 8-23.</p> <p>Page 281 lines 1-6.</p> <p>Page 282 line 2 to page 283 line 33.</p>
<p>actuating an output device that outputs at least one of video, audio, and</p>	<p>Column 20 lines 37-42.</p> <p>The signal transmission from processor, 204, also passes a signal word to signal processor, 200,</p> <p>which, in a predetermined fashion, signal processor, 200, decrypts and transfers</p>		

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					controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".
					(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
					Decryptor, 10, commences receiving said information, decrypting it using said key J information and transferring it to controller, 12, as quickly as controller, 12, accepts it. The process of decryption proceeds in a particular fashion. Said decrypt-a-00-header-message instructions cause controller, 20, to cause decryptor, 10, to transfer the first H bits without decrypting or altering said bits in any fashion, to decrypt and transfer the next X bits, to transfer the next L bits without decrypting or altering said bits, to decrypt and transfer the next MMS-L bits, and finally, to transfer any bits remaining after the last of said MMS-L bits without decrypting or altering said bits. In this fashion, the cadence information in said message, which is not encrypted, is transferred by decryptor, 10, to controller, 12, without alteration.
					In example #7, the program originating studio that originates the "Wall Street Week" transmission transmits a television signal that consists of so-called "digital video" and "digital audio," well known in the art. Prior to being transmitted, the digital video information is doubly encrypted, The digital audio is transmitted in the clear.
					...instructions causes microcomputer, 205, to
a physical product to	Column 20 lines 36-37.	to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.	Page 478 lines 1-5.		
	Column 14 lines 1-4.	Encrypted transmissions may be only partially encrypted.	Page 149 line 27 to page 150 line 6.		
		For example, only the video portion of the transmission may be encrypted. The audio portion may remain unencrypted.	Page 288 line 30 to page 289 line 4.		
		... and instruct control means, 226, to	Page 474 lines 3-7.		

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output some portion of said product, service, or media output on the basis of said communicated some data or instructions in respect of said product, service, or media output.	Column 20 line 21.	activate printer, 221. ... a printed copy ...	generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221.... ... your own printed copy ...
103. The method of claim 93, wherein at least one of said instructions is delivered in a multichannel signal transmitted by one of a remote transmitter station, said method further comprising the step of:	Column 20 lines 27-33.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, ...	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory and to causetransmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."
	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate

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	Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.	<p>Page 470 lines 19-21.</p> <p>Page 420 lines 21-29.</p>	<p>station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...</p> <p>... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.</p> <p>Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions.</p> <p>The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.</p>
tuning a converter to receive at least one of said instructions.	Column 19 lines 24-25.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X...	<p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p>	<p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;...</p>

104. The method of claim 93, further comprising the steps of: receiving at least one datum that designate one of one of a time and a channel of a transmission of one of said television program	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new</p>
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and said instructions and that specify one of the title of and some subject matter contained in one of said television program and said instructions; and subsequently		programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. ... to receive the transmission of cable channel 13; ...	
	Page 436 line 9 to page 437 line 3.		
			Page 439 lines 14-15.
receiving one of said television program and said instructions on the	Column 19 lines 20-29.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is	Page 436 line 9 to page 437 line 6.

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basis of said at least one datum.		being televised on channel X.			the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-on-CC13 ...
	Then, in a predetermined fashion, microcomputer, 205, may		Page 439 lines 9-15.		... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.
	instruct tuner, 214, to switch box, 201, to channel X		Page 295 lines 6-8.		Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...
	and may instruct control system, 220, to turn video recorder, 217, on and record		Page 445 lines 24-27.		...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...

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		"Wall Street Week,"	Page 446 lines 18-23.controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program. ...instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instructions to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M,and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audiotransmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.	
		and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on	Page 445 line 24 to page 446 line 1.		
		and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1.		
		Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Page 470 lines 1-3 and Page 470 lines 9-12.		
	Column 20 lines 16-19.		Page 470 lines 19-21.		

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claim 93, wherein said instructions incorporate downloadable code, said method further comprising the steps of		one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	15 line 2.
	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.
communicating said downloadable code to said processor; and	Column 7 lines 39-49.	In a pre-determined fashion, buffer/comparator, 8, identifies signal words and/or signal units that must be decrypted, either in whole or in part, and passes identified signal words and/or units to decrypter, 10. Decrypter, 10, uses conventional decrypter techniques, well known in the art, in a pre-determined fashion to decrypt such signals as required. Decrypter, 10, then passes the decrypted signals to processor or monitor, 12. Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 21-26.
		Decrypter, 10, is a standard digital information decryptor, well known in the art, that ... uses conventional decryptor techniques, well known in the art, to decrypt said signals as required. Decrypter, 10, transfers decrypted signals to controller, 12.	Page 30 line 31 to page 31 line 1.
		Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.	Page 30 lines 29-30.
actuating, on the basis of said downloadable code, at least one of a video, audio, and print output device, as appropriate, to output said at least one of a product, a service, and a media output.	Column 20 lines 36-37.	... and instruct control means, 226, to activate printer, 221.	Page 474 lines 3-7.
		... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...	

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	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1. Page 446 lines 17-21.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
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106. The method of claim 93, wherein said instructions incorporate downloadable code, said method further comprising the steps of:	Column 3 lines 3-8. Column 10 line 64 to column 11 line 3.	<p>The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>At distribution amplifiers, 63 through 70, each incoming feed is split into two paths. One is the conventional path whereby programming has flowed and continues to flow to recording devices, 76 and 78, and/or to flow to field distribution system, 93. The other path flows from each distribution amplifier, 63 through 70, individually to signal processor, 71.</p>	<p>Page 14 line 32 to page 15 line 2.</p> <p>Page 325 lines 17-27.</p>	<p>The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>In line between each of the aforementioned receiver/ demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, and matrix switch, 75, is a dedicated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, that splits each incoming feed into two paths. One path is the conventional path whereby programming flows from each given receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, to matrix switch, 75. The other path inputs the transmission of said given receiver/demodulator/input apparatus, 53, 54,</p>
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				Page 324 line 31 to page 325 line 2.	55, 56, 57, 58, 59, 60, 61, or 62, individually to signal processor system, 71. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire to a conventional matrix switch, 75, well known in the art, that outputs to one or more recorder/players, 76 and 78, and/or to apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, ...
communicating said downloadable code to said processor; and	Column 7 lines 39-49.	In a pre-determined fashion, buffer/comparator, 8, identifies signal words and/or signal units that must be decrypted, either in whole or in part, and passes identified signal words and/or units to decrypter, 10. Decrypter, 10, uses conventional decrypter techniques, well known in the art, in a pre-determined fashion to decrypt such signals as required. Decrypter, 10, then passes the decrypted signals to processor or monitor, 12. Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.		Page 30 lines 21-26. Page 30 line 31 to page 31 line 1. Page 30 lines 29-30.	In a fashion described more fully below, buffer/comparator, 8, and a controller, 20, which, too, is described more fully below, determine whether signal processor, 26, is enabled to decrypt said information. If signal processor, 26, is so enabled, buffer/comparator, 8, transfers said information to decryptor, 10. Decryptor, 10, is a standard digital information decryptor, well known in the art, that ... uses conventional decryptor techniques, well known in the art, to decrypt said signals as required. Decryptor, 10, transfers decrypted signals to controller, 12. Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
decrypting, on the basis of said downloadable code, at least a portion of said television program or said instructions.	Column 20 lines 37-42.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200,		Page 477 lines 8-23.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...

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		By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")	Page 281 lines 1-6.
which, in a predetermined fashion, signal processor, 200, decrypts and transfers		... the information of said segments is encrypted prior to transmission ... The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ... Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "11111".	Page 282 line 2 to page 283 line 33.
to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.		(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)	Page 478 lines 1-5.
Column 20 lines 47-48.	... to decrypter, 224, for decryption ...	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described	Page 478 lines 1-5.

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				above--for example, in the method of the first message of example #4.)
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107. The method of claim 93, wherein said instructions incorporate downloadable code, said method further comprising the steps of:	Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. (The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 line 32 to page 15 line 2. Page 14 lines 27-29.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. (The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...
communicating said downloadable code to said processor; and	Column 7 lines 39-49.	In a pre-determined fashion, buffer/comparator, 8, identifies signal words and/or signal units that must be decrypted, either in whole or in part, and passes identified signal words and/or units to decryptor, 10. Decryptor, 10, uses conventional decrypter techniques, well known in the art, in a pre-determined fashion to decrypt such signals as required. Decryptor, 10, then passes the decrypted signals to processor or monitor, 12. Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 21-26. Page 30 line 31 to page 31 line 1. Page 30 lines 29-30.	In a fashion described more fully below, buffer/comparator, 8, and a controller, 20, which, too, is described more fully below, determine whether signal processor, 26, is enabled to decrypt said information. If signal processor, 26, is so enabled, buffer/comparator, 8, transfers said information to decryptor, 10. Decryptor, 10, is a standard digital information decryptor, well known in the art, that ... uses conventional decryptor techniques, well known in the art, to decrypt said signals as required. Decryptor, 10, transfers decrypted signals to controller, 12. Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
controlling, on the basis of said downloadable code, a selective	Column 20 lines 33-36.	... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded	Page 476 line 34 to page 477 line 8.	(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is

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transmission device to communicate at least some of said at least one of a product, a service, and a media output to said output device.		digital form ...	<p>entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....</p> <p>Page 477 lines 8-17.</p>
108. The method of claim 93, wherein said instructions incorporate downloadable code, said method further comprising the steps of:	<p>Column 3 lines 3-8.</p> <p>Column 2 lines 63-66.</p>	<p>The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...</p>	<p>The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...</p>
communicating said downloadable code to	Column 7 lines 39-49.	In a pre-determined fashion, buffer/comparator, 8, identifies signal	In a fashion described more fully below, buffer/comparator, 8, and a controller, 20,

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said processor; and			words and/or signal units that must be decrypted, either in whole or in part, and passes identified signal words and/or units to decrypter, 10. Decrypter, 10, uses conventional decrypter techniques, well known in the art, in a pre-determined fashion to decrypt such signals as required. Decrypter, 10, then passes the decrypted signals to processor or monitor, 12. Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 line 31 to page 31 line 1.	which, too, is described more fully below, determine whether signal processor, 26, is enabled to decrypt said information. If signal processor, 26, is so enabled, buffer/comparator, 8, transfers said information to decrypter, 10. Decrypter, 10, is a standard digital information decrypter, well known in the art, that ... uses conventional decrypter techniques, well known in the art, to decrypt said signals as required. Decrypter, 10, transfers decrypted signals to controller, 12. Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
	generating, on the basis of said downloadable code, a receiver specific datum to present with received programming.	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
109. The method of claim 93, wherein said instructions incorporate downloadable code, said method further comprising the steps of:		Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 32 to page 15 line 2.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
		Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...

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communicating said downloadable code to said processor; and	Column 7 lines 39-49.	In a pre-determined fashion, buffer/comparator, 8, identifies signal words and/or signal units that must be decrypted, either in whole or in part, and passes identified signal words and/or units to decrypter, 10. Decrypter, 10, uses conventional decrypter techniques, well known in the art, in a pre-determined fashion to decrypt such signals as required. Decrypter, 10, then passes the decrypted signals to processor or monitor, 12. Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 21-26. Page 30 line 31 to page 31 line 1. Page 30 lines 29-30.
delivering, on the basis of said downloadable code, a receiver specific datum at said interactive television viewing apparatus simultaneously or	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And the Fig. 1C combining is displayed.
sequentially with said television program or	Column 19 line 67 to column 20 line 1. Column 20 lines 16-19.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ... Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performancetransmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic

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said at least one of a product, a service, and a media output.	Column 20 lines 46-49.	Page 470 lines 9-12.	Meals of India."
			At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...
			... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
			One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe-... instructions ...
			... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....
			... causes ... said decoder, 290, to detect and process properly the information of said second message.
		Page 477 lines 12-17.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
		Page 478 lines 1-5.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.
		Page 475 lines 1-2.	

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110. The method of claim 93, wherein said interactive television viewing apparatus includes a storage device, said method further comprising the step of:	Column 16 lines 32-35.	For example, a person might instruct video cassette recorder, 135, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.	Page 319 lines 30-33.	For example, a subscriber might instruct video recorder/player, 217, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.
communicating an identification code to said storage device and storing said identification code at a storage location associated with said television program.	Column 16 lines 35-39. Column 15 lines 57-62.	Recorder, 135, might receive the programming over Manhattan Cable TV channel 4 and record the programming from 7:00 PM to 7:30 PM on the evening of July 15, 1985. The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Page 319 line 33 – Page 320 line 2. Page 315 lines 20-24. Page 44 lines 26-32.	Recorder, 217, might receive the programming over Manhattan Cable TV channel 4 and record the programming at the time of original broadcast transmission--from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned. Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.
			Page 49 line 26 to Page 50 line 4.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:

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	Column 16 lines 25-32.	One particular advantage of these methods for monitoring programming is that, by locating the identifier signals in the audio and/or video and/or other parts of the program that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded on video cassette recorders and on how people replay such recordings.	Page 28 lines 26-27. Page 319 lines 23-30.	... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times monitor information that identifies what programming is available, ... One particular advantage of these methods for monitoring programming is that, by embedding the SPAM information in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded, for example, on video and audio cassette recorders and on how people replay such recordings.
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111. The method of claim 93, wherein said interactive television viewing apparatus includes a storage device, said method further comprising the step of:	Column 19 lines 15-18.	Signal processor, 200, receives this instruction from microcomputer, 205, at its processor or monitor, 12, which reacts, ...	Page 288 lines 16-20.	... microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.
communicating to and storing at said storage device some information to evidence one of one of an availability and	Column 19 lines 9-20.	When that time comes, microcomputer, 205, receives no program identification signals whatever from TV signal decoder, 203, which indicates that the set, 202, is not on. Microcomputer, 205, instructs signal processor, 200, to	Page 444 lines 33-34. Page 288 lines 13-20.	... decoder, 145, to determine, in a predetermined fashion, that power is not on to monitor, 202M, and to respond by ... As Fig. 4 shows, ... in the preferred embodiment, microcomputer, 205, may also

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		automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.	
		... cause microcomputer, 205, to input particular preprogrammed instructions to said controller, 20, ...	Page 445 lines 8-10.
	pass all program and channel identifiers on all programming being cablecast on the multi-channel system.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C....	Page 435 lines 16-18.
		Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.	Page 248 lines 22-26 from example #5.
		Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...	Page 250 lines 13-16 from example #5.
		Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter-monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel	Page 252 lines 15-35 from example #5.

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				mark of said meter-monitor segment segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...
			Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
	Signal processor, 200, receives this instruction from microcomputer, 205, at its processor or monitor, 12, which reacts,		Page 288 lines 16-20.	...microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.
	in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14.		Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...
			Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205.

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			Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
		Page 258 line 28 to page 259 line 12 from example #5.	In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)
	Column 15 lines 57-62.	Page 315 lines 20-24.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
		Page 44 lines 26-32.	Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes

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use of said television program and	Column 19 lines 9-20.	When that time comes, microcomputer, 205, receives no program identification signals whatever from TV signal decoder, 203, which indicates that the set, 202, is not on. Microcomputer, 205, instructs signal processor, 200, to	Page 49 line 26 to Page 50 line 4.	subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below. Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ...
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
		pass all program and channel identifiers on all programming being cablecast on the multi-channel system.	Page 444 lines 33-34.	... decoder, 145, to determine, in a predetermined fashion, that power is not on to monitor, 202M, and to respond by ...
			Page 288 lines 13-20.	As Fig. 4 shows, ... in the preferred embodiment, microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.
			Page 445 lines 8-10.	... cause microcomputer, 205, to input particular preprogrammed instructions to said controller, 20, ...
			Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the

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			<p>Page 248 lines 22-26 from example #5.</p> <p>Page 250 lines 13-16 from example #5.</p> <p>Page 252 lines 15-35 from example #5.</p>	<p>apparatus of the signal processor, 200, of the station of Fig. 7 and 7C....</p> <p>Via a conventional multi- channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...</p> <p>Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter- monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment)</p> <p>then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...</p>
		Signal processor, 200, receives this instruction from microcomputer, 205, at its processor or monitor, 12, which reacts,		

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		<p>in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14.</p>	<p>Page 267 lines 20-28 from example #5.</p> <p>Page 288 lines 16-20.</p> <p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 258 line 28 to page 259 line 12 from example #5.</p>	<p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>...microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message</p>	<p>Support to instant specification.</p>

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a portion of digital data.	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.		causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of a available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)
	Column 20 lines 27-29. Column 3 lines 3-8.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ... The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 470 lines 1-3 and Page 470 lines 9-12.	... transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...
			Page 470 lines 19-21.	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
			Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
			Page 14 line 32 to page 15 line 2.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded

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				together on a single line of video or sequentially in audio.
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112. The method of claim 93, wherein said interactive television viewing apparatus includes a storage device, said method further comprising the step of:	Column 20 lines 31.	This signal instructs buffer/comparator, 8, ...	Page 472 lines 13-15.	Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, ...
storing at said storage device an instruct signal which is effective to generate output to be associated with said at least one of a product, a service, and a media output.	Column 20 lines 31.	This signal instructs buffer/comparator, 8, ...	Page 472 lines 13-15.	Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, ...

113. The method of claim 93, wherein said interactive television viewing apparatus includes a storage device, said method further comprising the step of:	Column 20 lines 29-30.	... which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.	Page 472 lines 4-12. Page 37 line 26 to page 38 line 8.	... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
storing at said storage	Column 19 lines 63 to	This signal is identified by decoder, 203,	Page 26 lines 1-2.	Said signal is identified by decoder, 203;

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<p>device an instruct signal which is effective to display one of a combined and a sequential presentation of a mass medium program, and a user specific datum.</p>	<p>column 20 line 2.</p>	<p>and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p>		<p>Page 37 line 26 to page 38 line 8.</p>	<p>transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions a subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>
				<p>Page 26 lines 4-11.</p>	<p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p>
	<p>Column 20 lines 29-30.</p>	<p>... which is also transferred by processor, 204, to buffer/comparator, 8, of signal</p>		<p>Page 451 line 3. Page 472 lines 4-12.</p>	<p>And the Fig. 1C combining is displayed.</p> <p>... Automatically, the controller, 39, of decoder, 145, ... transfers said message to</p>

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		processor, 200.	Page 37 line 26 to page 38 line 8.	said controller, 20. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
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114. The method of claim 93, wherein said interactive television viewing apparatus includes a storage device, said method further comprising the step of:	Column 19 lines 25-27.	... and [microcomputer, 205,] may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...	Page 445 lines 24-27.	... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...
storing at said storage device an instruct signal which is effective to process	Column 19 lines 25-27.	... and [microcomputer, 205,] may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...	Page 446 lines 18-23.	... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
a user reaction	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 445 lines 24-27.	... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, ...
		Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions, identify and discriminate among one or more pieces of external	Page 446 lines 18-23.	... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
			Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
			<i>In General</i> Page 15 lines 16-23.	The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming

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	equipment to which such signals are addressed, and transfer such signals to such equipment as directed.		transmissions and convert the encoded signals to digital information; ...
	... which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.	Page 34 lines 24-26.	... identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus ...
	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.	Page 44 lines 14-15.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ...
	to content of an information transmission which contains one of said television program and said at least one of a product, a service, and a media output.	Page 95 lines 18-21.	Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205.
		Specifically Column 20 lines 29-30.	... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20.
		Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		Page 420 lines 21-29.	Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions. The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively,

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	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Page 470 lines 1-3 and Page 470 lines 9-12.	that are inputted to converter boxes, 222 and 201, and to signal processor, 200. ...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...
	Column 20 lines 33-36.	... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	Page 470 lines 19-21.	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
			Page 476 line 34 to page 477 line 8.	(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.
			Page 477 lines 8-17.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to

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			cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....
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115. The method of claim 93, wherein said interactive television viewing apparatus includes a storage device, said method further comprising the step of:	Column 8 lines 20-25.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22.	Page 33 lines 7-12.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22.
storing at said storage device an instruct signal which is effective to establish communication with a remote station.	Column 8 lines 20-27.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.	Page 33 lines 7-20.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has a capacity for controlling the operation of all elements of the signal processor ...
	Column 8 lines 58-65.	Control signals can be passed to the apparatus by means of the programming transmissions input at switch, 1, and mixer, 2. An example of such a control signal is an instruction for the apparatus to contact a remote telephone unit. The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines.	Page 59 lines 29-31. Page 290 lines 26-31.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ...
			Page 291 lines 21-24.	In the fashions described above, so transmitting said SPAM message causes

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			<p>signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...</p> <p>The next day, February 28, 1988 at 2:32 AM, receiving particular time information from said clock, 18, causes said controller, 20, again to cause said switch, 1, and said mixer, 3, to input the transmission of said master channel to said decoder, 30, and to cause said decoder, 30, to commence processing to detect a SPAM end of file signal.</p> <p>Said message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30.</p> <p>Receiving said message causes said controller, 39, to transmit said Read-Meters-of-Selected-Stations SPAM message to the controller, 20, of the signal processor, 200, of said station.</p> <p>Executing said ones causes controller, 20, to transmit the current reading information of utilities meter, 262, to a remote metering station computer and cause said computer to process said information. Automatically, controller, 20, ... activates telephone connection, 22; inputs a particular telephone number ...</p> <p>Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 ...</p>	
	Page 402 lines 21-26.			
	Page 403 lines 7-12.			
	Page 405 lines 20-29.			
	For example, page 531 lines 17-22.			

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				Page 477 lines 8-17.	entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station. In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...
117. The method of claim 93, wherein said interactive television viewing apparatus includes a storage device, said method further comprising the step of:	Column 20 lines 29-30.	... which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.		Page 472 lines 4-12. Page 37 line 26 to page 38 line 8.	... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
storing at said storage	Column 19 lines 63 to	This signal is identified by decoder, 203,		Page 26 lines 1-2.	Said signal is identified by decoder, 203; METE 065, Appendix A, Page 497 c

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device an instruct signal which is effective to process a digital television signal.	column 20 line 2.	and transferred via processor, 204, to microcomputer, 205. This signal instructs overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		Page 37 line 26 to page 38 line 8.	transferred to microcomputer, 205; and executed ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and correct; to modify selectively particular predetermined fashion or fashions; to identify in a predetermined fashion or fashions a subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
				Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
	Column 20 lines 29-30.	... which is also transferred by processor, 204, to buffer/comparator, 8, of signal		Page 451 line 3. Page 472 lines 4-12.	And the Fig. 1C combining is displayed. ... Automatically, the controller, 39, of decoder, 145, ... transfers said message to

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		processor, 200.	Page 37 line 26 to page 38 line 8.	said controller, 20. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
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118. The method of claim 93, wherein said interactive television viewing apparatus includes a storage device, said method further comprising the step of:	Column 20 lines 37-39.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200, ...	Page 477 lines 8-23. Page 281 lines 1-6.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called " covert control .")
storing at said storage device one of a code and a datum to serve as a basis for	Column 20 lines 37-42.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200,	Page 477 lines 8-23.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the

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		controller, 39, of said decoder, 290. In due course, said programming originating ...	
		By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")	Page 281 lines 1-6.
	which, in a predetermined fashion, signal processor, 200, decrypts and transfers	... the information of said segments is encrypted prior to transmission ... The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ... Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".	Page 282 line 2 to page 283 line 33.
	to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)	Page 478 lines 1-5.
Column 3 lines 3-8.		The term "signal word" hereinafter means one full discrete appearance of a signal as	Page 14 line 32 to page 15 line 2.

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enabling an output device to output at least some of said at least one of a product, a service, and a media output.	Column 20 lines 45-46.	<p>embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>... and all necessary equipment was enabled.</p>		Page 473 line 29 to page 474 line 1.	<p>embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe-... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p>
	Column 20 lines 46-49.	<p>When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.</p>		Page 473 lines 3-13.	<p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe-... instructions ...</p>
				Page 477 lines 12-17.	<p>... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....</p>
				Page 477 lines 23-29.	<p>... causes ... said decoder, 290, to detect and process properly the information of said second message.</p>
				Page 478 lines 1-5.	<p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p>

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			Page 475 lines 1-2.
		Receiving said output information causes printer, 221, to print the information of said specific recipe and list.	
119. The method of claim 93, comprising the step of discarding one duplicate data.	Column 7 line 67 to column 8 line 1.	To avoid overloading digital recorder, 16, with duplicate data, buffer/comparator, 14, has means for counting and discarding duplicate signals.	Page 32 lines 9-12.
120. The method of claim 93, comprising the step of: storing said viewer reply for subsequent processing in response to at least one of said instructions.	Column 20 lines 26-27. Column 20 lines 23-26. Column 20 lines 31-33.	... to hold and process further in a predetermined fashion. The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 471 lines 22-25. Page 471 lines 14-21. Page 472 lines 15-17.
		Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory. Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station. ... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...	

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121. The method of claim 93, comprising the step of: assembling and communicating to a remote site data evidencing said viewer reply.	Column 9 line 68 to column 10 line 2.	The controller, 20, instructs buffer/comparator, 14, what signals to discard and how to mark signals and assemble signal strings.	Page 32 lines 20-21. Page 223 lines 22-33.
		Buffer/comparator, 14, operates under control of controller, 20, ... Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter & monitor information from (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing information from clock, 18. When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion then discard all information of said record from its memory and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion. ...Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information. Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe-... instructions at microcomputer, 205, and to transfer	
	Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.	Page 224 lines 12-18. Page 472 lines 23-27.
			Page 473 line 29 to page 474 line 1.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
Reference		Language		Reference	
Language		Language		Language	
	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	Page 28 lines 25-35.	particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.	
		that site can determine for billing purposes that the recipe was,	Page 44 lines 26-30.	[Signal processor in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.	
			Page 471 lines 26-31.	... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...	
			Page 473 lines 3-8.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,.... One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...	

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Claim Language	Reference	Language	Reference
one of a resource and	Column 17 lines 21-24.	In this fashion, besides facilitating data gathering on how programming is used, signal processing apparatus and methods also permit the evaluation of how equipment is used.	Page 312 lines 33-35.
a control signal at a receiver station, said receiver station having a	Column 17 lines 13-16.	Every instruction or information signal transmitted from processor, 140, to microcomputer, 142, is also transmitted to signal processor, 130, ...	Page 315 line 30 to page 316 line 6.
processor and a	Column 17 lines 13-16.	Every instruction or information signal transmitted from processor, 140, to microcomputer, 142, is also transmitted to signal processor, 130, ...	Page 315 line 30 to page 316 line 6.
is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage.		Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation and exemplifies one embodiment...	
Decoder, 203, has means for detecting SPAM information in any programming transmission inputted to its associated apparatus, microcomputer, 205, and not only for detecting and transferring to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message of said transmissions but also for inputting selected detected information to microcomputer, 205, in and for controlling microcomputer, 205, in selected fashions. (Fig. 5 also shows that decoder, 203, has capacity for inputting detected information to signal processor, 200, and for receiving from and transferring control information to signal processor, 200.)		Decoder, 203, has means for detecting SPAM information in any programming transmission inputted to its associated apparatus, microcomputer, 205, and not only for detecting and transferring to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message of said transmissions but also for inputting selected detected information to microcomputer, 205, in and for controlling microcomputer, 205, in selected fashions. (Fig. 5 also shows that decoder, 203, has capacity for inputting detected information to signal processor, 200,	

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
controlled device, said receiver station	Column 17 lines 13-16.	Every instruction or information signal transmitted from processor, 140, to microcomputer, 142, is also transmitted to signal processor, 130, ...	Page 315 line 30 to page 316 line 6.	and for receiving from and transferring control information to signal processor, 200.)	
	transferring said gathered information to a remote station, said method comprising the steps of:	... to be handled, recorded, and transmitted to a remote site with all other monitor information.	Page 28 lines 25-35	Decoder, 203, has means for detecting SPAM information in any programming transmission inputted to its associated apparatus, microcomputer, 205, and not only for detecting and transferring to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message of said transmissions but also for inputting selected detected information to microcomputer, 205, in and for controlling microcomputer, 205, in selected fashions. (Fig. 5 also shows that decoder, 203, has capacity for inputting detected information to signal processor, 200, and for receiving from and transferring control information to signal processor, 200.)	
(1) identifying at least one of	Column 15 lines 57-62.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks,	Page 315 lines 20-24.	[Signal processor ... 200 in Fig. 7 ... and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.	
		Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the			

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Claim Language	Reference	Language	Reference
	<p>broadcast stations, channels on cable systems, and possibly times of transmission.</p>	<p>transmission to which its associated apparatus is tuned.</p> <p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ... <p>... monitor information that identifies what programming is available, ...</p>	<p>Page 44 lines 26-32.</p> <p>Page 49 line 26 to Page 50 line 4.</p> <p>Page 28 lines 26-27.</p> <p>Page 315 line 30 to page 316 line 6.</p>
<p>a resource and</p>	<p><u>ONE OF:</u> Column 17 lines 13-16.</p> <p>Every instruction or information signal transmitted from processor, 140, to microcomputer, 142, is also transmitted to signal processor, 130, ...</p>	<p>Decoder, 203, has means for detecting SPAM information in any programming transmission inputted to its associated apparatus, microcomputer, 205, and not only for detecting and transferring to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message of said transmissions but also for inputting selected detected information to microcomputer, 205, and for controlling microcomputer, 205, in selected fashions. (Fig. 5 also shows that decoder, 203, has capacity for inputting</p>	

Support to parent application filed November 3, 1981.		Support to instant specification.	
Claim Language	Reference	Language	Reference
a control signal;	OR Column 15 lines 27-30.	FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programming usage and associated uses of other data transmissions and equipment.	Page 312 line 33 to page 313 line 8.
	Column 17 lines 13-16.	Every instruction or information signal transmitted from processor, 140, to microcomputer, 142, is also transmitted to signal processor, 130, ...	Page 28 lines 25-29. Page 315 line 30 to page 316 line 6.
		<p>detected information to signal processor, 200, and for receiving from and transferring control information to signal processor, 200.)</p> <p>Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing ...</p> <p>[Signal processor 200 in Fig. 7 and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage.</p> <p>Decoder, 203, has means for detecting SPAM information in any programming transmission inputted to its associated apparatus, microcomputer, 205, and not only for detecting and transferring to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message of said transmissions but also for inputting selected detected information to microcomputer, 205, and for controlling microcomputer, 205, in selected fashions. (Fig. 5 also shows that decoder, 203, has capacity for inputting detected information to signal processor, 200,</p>	

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Claim Language	Reference	Language	Reference
(2) monitoring at least one of said resource and	Column 17 lines 10-12.	Signal divider, 139, illustrates another type of monitoring that signal processing apparatus and methods can facilitate.	Page 315 lines 25-28.
	<u>ONE OF:</u> Column 17 lines 13-16.	Every instruction or information signal transmitted from processor, 140, to microcomputer, 142, is also transmitted to signal processor, 130, ...	Page 315 line 30 to page 316 line 6.
	<u>OR</u> Column 15 lines 27-30.	FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programing usage and associated uses of other data transmissions and equipment.	Page 312 line 33 to page 313 line 8.
		and for receiving from and transferring control information to signal processor, 200.)	
		In Fig. 5, decoder, 203, which is part of the signal processor system of the station of Fig. 5, not only monitors the operation of its associated apparatus, microcomputer, 205, but also controls said apparatus, ...	
		Decoder, 203, has means for detecting SPAM information in any programming transmission inputted to its associated apparatus, microcomputer, 205, and not only for detecting and transferring to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message of said transmissions but also for inputting selected detected information to microcomputer, 205, and for controlling microcomputer, 205, in selected fashions. (Fig. 5 also shows that decoder, 203, has capacity for inputting detected information to signal processor, 200, and for receiving from and transferring control information to signal processor, 200.)	
		Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing ...	
		[Signal processor 200 in Fig. 7 and elsewhere]	Page 28 lines 25-29.

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said control signal;	Column 17 lines 13-16.	Every instruction or information signal transmitted from processor, 140, to microcomputer, 142, is also transmitted to signal processor, 130, ...	Page 315 line 30 to page 316 line 6.	has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. Decoder, 203, has means for detecting SPAM information in any programming transmission inputted to its associated apparatus, microcomputer, 205, and not only for detecting and transferring to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message of said transmissions but also for inputting selected detected information to microcomputer, 205, and for controlling microcomputer, 205, in selected fashions. (Fig. 5 also shows that decoder, 203, has capacity for inputting detected information to signal processor, 200, and for receiving from and transferring control information to signal processor, 200.)
	Column 17 lines 17-21.	In a predetermined fashion, signal processor, 130, identifies and marks the source of signals as coming from a device, 139, monitoring signal usage rather than programming usage and viewership.	Page 322 lines 19-26.	For example, in the case of the "Wall Street Week" program, transmitting the first and second SPAM messages of example #3 (which are not encrypted) will cause not only decoder, 203, to process the meter-monitor information of said messages and transmit the aforementioned 1st monitor information (#3) and 2nd monitor information (#3), via the monitor information bus means of Fig. 5, to onboard controller, 14A.
			Page 174 lines 4-23.	Under control of said instructions, said match causes control processor, 39J, ... to transfer to said buffer/comparator, 14, header information that identifies a transmission of monitor information then particular decoder-203 information that is the source

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Claim Language	Reference	Language	Reference
(3) storing a record of the use of at least one of said resource and said control signal from said step of monitoring; and	Column 17 lines 10-24.	Signal divider, 139, illustrates another type of monitoring that signal processing apparatus and methods can facilitate. Signal divider, 139, monitors the use of signals rather than the use of programming. Every instruction or information signal transmitted from processor, 140, to microcomputer, 142, is also transmitted to signal processor, 130, to be handled, recorded, and transmitted to a remote site with all other monitor information. In a predetermined fashion, signal processor, 130, identifies and marks the source of signals as coming from a device, 139, monitoring signal usage rather than programming usage and viewership. In this fashion, besides facilitating data gathering on how programming is used, signal processing apparatus and methods also permit the evaluation of how equipment is used.	<p>mark of said decoder, 203, ... then all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")</p> <p>In Fig. 5, decoder, 203, which is part of the signal processor system of the station of Fig. 5, not only monitors the operation of its associated apparatus, microcomputer, 205, but also controls said apparatus, in the fashions described above, in the execution of SPAM controlled functions. Decoder, 203, has means for detecting SPAM information in any programming transmission inputted to its associated apparatus, microcomputer, 205, and not only for detecting and transferring to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message of said transmissions but also for inputting selected detected information to microcomputer, 205, and for controlling microcomputer, 205, in selected fashions. (Fig. 5 also shows that decoder, 203, has capacity for inputting detected information to signal processor, 200, and for receiving from and transferring control information to signal processor, 200.)</p> <p>[Signal processor ... 200 in Fig. 7 ... and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used, and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records</p> <p>Page 315 line 25 to page 316 line 6.</p> <p>Page 28 lines 25-35.</p>

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				<p>automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>For example, in the case of the "Wall Street Week" program, transmitting the first and second SPAM messages of example #3 (which are not encrypted) will cause not only decoder, 203, to process the meter-monitor information of said messages and transmit the aforementioned 1st monitor information (#3) and 2nd monitor information (#3), via the monitor information bus means of Fig. 5, to onboard controller, 14A.</p> <p>A match results. Under control of said instructions, said match causes control processor, 39J, to cause matrix switch, 39I, to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, (while said switch is simultaneously transferring information from control processor, 39J, to the CPU of microcomputer, 205); to transfer to said buffer/comparator, 14, header information that identifies a transmission of monitor information then particular decoder-203 information that is the source mark of said decoder, 203, (which source mark is binary information that is preprogrammed at control processor, 39J) then all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; then to cause matrix switch, 39I, to cease transferring information from control processor, 39J, to said buffer/comparator, 14. (Said received information is complete information of the first combining synch</p>	

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			command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1 st monitor information (#3).")
		Page 312 lines 33-35.	Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation and exemplifies one embodiment ...
(4) communicating information evidencing said use of at least one of said resource and said control signal from said step of storing a record from said receiver station to a remote station.	Column 17 lines 16-17.	... to be handled, recorded, and transmitted to a remote site with all other monitor information.	[Signal processor ... 200 in Fig. 7 ... and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.

123. The method of claim 122, wherein at least one of said resource and said control signal is	Column 15 lines 57-62.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
		Page 44 lines 26-32.	Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
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one of a broadcast and a cablecast television signal, said method further comprising the steps of:					assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.
					Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times monitor information that identifies what programming is available, ...
selecting information designating programming contained in one of said broadcast and said cablecast television signal; and					Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.
					At any given subscriber station, any given SPAM decoder may merely monitor the operation of its associated Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.

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		signals to signal processor, 130, ...	<p>Page 313 lines 16-23.</p> <p>Fig. 5 shows a variety of input apparatus with capacity for inputting programming (including SPAM information) selectively, via matrix switch, 258, to apparatus of the subscriber station of Fig. 5, intermediate apparatus with capacity for processing and/or recording inputted programming selectively, and output apparatus for displaying or otherwise outputting programming selectively to human senses.</p> <p>Associated with each intermediate apparatus and output apparatus is one or more appropriate decoders. ... At TV tuner, 215, is TV decoder, 282. ... At TV monitor, 202M, is TV decoder, 145.</p> <p>Fig. 5 shows each decoder as having capacity for transferring monitor information to signal processor, 200, by bus communications means.</p> <p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p>
			<p>Page 314 lines 20-28.</p> <p>Associated with each intermediate apparatus and output apparatus is one or more appropriate decoders. ... At TV tuner, 215, is TV decoder, 282. ... At TV monitor, 202M, is TV decoder, 145.</p> <p>Fig. 5 shows each decoder as having capacity for transferring monitor information to signal processor, 200, by bus communications means.</p> <p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p>
			<p>Page 315 lines 6-8.</p> <p>Fig. 5 shows each decoder as having capacity for transferring monitor information to signal processor, 200, by bus communications means.</p> <p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p>
			<p>Page 315 lines 20-24.</p> <p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p>
communicating said selected information from said step of selecting to said remote station.	Column 17 lines 6-9.	At a time when buffer/comparator, 14, determines in a predetermined fashion that it will receive no further duplicate signals, it transfers the full signal string to recorder, 16.	<p>Page 179 lines 14-24.</p> <p>Automatically, said process- monitor-info instructions cause onboard controller, 14A, in a predetermined fashion, to locate the instance of "program unit identification code" information in said record of the prior programming displayed at monitor, 202M, and to compare said first named instance of "program unit identification code" information to said second named instance. No match results.</p> <p>Not resulting in a match causes onboard</p>

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Claim Language	Reference	Language	Reference
	Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.	<p>controller, 14A, to cause signal processor, 200, to record said record of prior programming at recorder, 16.</p> <p>Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...</p> <p>The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.</p> <p>... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records to and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.</p>
124. The method of claim 122, wherein at least one of said resource and said control signal is	Column 15 lines 57-62.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	<p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p> <p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information</p>

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	Reference	Language	Reference	Language
one of a broadcast and a cablecast data signal, said method further comprising the steps of:	Column 6 lines 23-30.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	<p>include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times monitor information that identifies what programming is available, ... <p>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.</p> <p>Page 28 lines 26-27.</p> <p>Page 29 lines 4-15.</p>	<ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times monitor information that identifies what programming is available, ... <p>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.</p>
selecting information designating a function performed in respect of at least one of said resource and said control signal; and	Column 17 lines 17-21.	In a predetermined fashion, signal processor, 130, identifies and marks the source of signals as coming from a device, 139, monitoring signal usage rather than programming usage and viewership.	<p>Page 322 lines 19-26.</p> <p>Page 174 lines 4-23.</p>	<p>For example, in the case of the "Wall Street Week" program, transmitting the first and second SPAM messages of example #3 (which are not encrypted) will cause not only decoder, 203, to process the meter-monitor information of said messages and transmit the aforementioned 1st monitor information (#3) and 2nd monitor information (#3), via the monitor information bus means of Fig. 5, to onboard controller, 14A.</p> <p>Under control of said instructions, said match causes control processor, 39J, ... to transfer to said buffer/comparator, 14, header information that identifies a transmission of monitor information then particular decoder-203 information that is the source mark of said decoder, 203, ... then all of the received binary information of said first</p>

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				message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")
communicating said selected information from said step of selecting to said remote station.	Column 17 lines 16-17.	... to be handled, recorded, and transmitted to a remote site with all other monitor information.	Page 28 lines 25-35	[Signal processor ... 200 in Fig. 7 ... and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.

125. The method of claim 122, further comprising the step: designating a source of at least one of said resource said control signal; and	Column 15 lines 63-65.	In the case of data transmitted to the micro-computer, [the signals for which the decoders are monitoring] may be unique codes that identify the source and suppliers of the data.	Page 49 lines 26-28. Page 50 lines 19-20.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: unique codes that identify the sources and suppliers of computer data.
communicating said source information from said step of processing to said remote station.	Column 16 lines 51-54.	Signal processor, 130, would probably receive these signals from decoders, 131, 136, 138, 143, 145, 147, 149, and 150) at its buffer/comparator unit, 14 (referring to FIG. 1), ...	Page 315 lines 6-10.	Fig. 5 shows each decoder as having capacity for transferring monitor information to signal processor, 200, by bus communications means. Said information is received (and processed) at signal processor, 200, by the onboard controller, 14A, ...

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			telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.
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126. The method of claim 122, further comprising the step: processing information designating a time in respect of at least one of said resource and said control signal; and	Column 16 lines 51-61.	Signal processor, 130, would probably receive these signals from decoders, 131, 136, 138, 143, 145, 147, 149, and 150) at its buffer/comparator unit, 14 (referring to FIG. 1),	Page 315 lines 6-10.	Fig. 5 shows each decoder as having capacity for transferring monitor information to signal processor, 200, by bus communications means. Said information is received (and processed) at signal processor, 200, by the onboard controller, 14A, ...
			Page 32 lines 24-33.	(In circumstances where information collecting and processing functions are extensive--for example, when a given buffer/comparator, 14, must collect monitor information at a subscriber station with apparatus and/or communications flows that are extensive and complex--buffer/comparator, 14, may operate under control of a dedicated, so-called "on-board" controller, 14A, at buffer/comparator, 14, which is preprogrammed with appropriate control instructions and is controlled by controller, 20, similarly to the fashion in which controller, 12 is controlled by controller, 20.)
		in a predetermined fashion that would permit signal processor, 130, to identify which decoder the individual signals come from	Page 322 lines 33-35. Page 174 lines 4-17.	...that the source mark information identifies decoder, 282, rather than decoder, 203. Under control of said instructions, said match causes control processor, 39J, ... to transfer to said buffer/comparator, 14, header information that identifies a transmission of monitor information then particular decoder-203 information that is the source mark of said decoder, 203,....
			Page 178 lines 27-35.	Automatically, said instructions cause

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				onboard controller, 14A, to compare the information at said source-mark-@14A memory, in a predetermined fashion, with particular pre-entered source-identification mark information that onboard controller, 14A, retains in memory associated with its pre-entered signal records of monitor information. A match results with that particular decoder-203 source mark information that is associated with the aforementioned record of the prior programming displayed at monitor, 202M.
	and, in a predetermined fashion, create a signal string		Page 180 lines 1-3.	Then said process-monitor-info instructions cause onboard controller, 14A, to initiate a new monitor record that reflects the new "Wall Street Week" programming.
	by appending digital information to the received signal which information might		Page 297 line 15.	...creating a meter record that records the decryption....
			Page 180 lines 4-15.	Automatically, said instructions cause onboard controller, 14A, in a predetermined fashion, to delete ... except the source mark information associated with said record; to record information of said first named instance of "program unit identification code" information (which is the "program unit identification code" of said "Wall Street Week" program to a particular "program unit identification code" location at said record location; to select particular information located at said SPAM-input-signal-@14A register memory and record information at said record location; to select particular preprogrammed record....
	identify the individual decoder, 131, 136, 138, 143, 145, 147, 149, or 150 and the time of receipt at signal processor, 130.		Page 181 lines 8-14.	In a predetermined fashion, onboard controller, 14A, also records in a particular monitor record field location at said record location a particular display unit identification code that identifies monitor, 202M, as the

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	Column 17 lines 12-17.	Signal divider, 139, monitors the use of signals rather than the use of programming. Every instruction or information signal transmitted from processor, 140, to microcomputer, 142, is also transmitted to signal processor, 130, to be handled, recorded, and transmitted to a remote site with all other monitor information.		Page 315 line 25 to page 316 line 6.	display apparatus of said new monitor record. In a predetermined fashion, signal processor, 200, records date and time information received from clock, 18, in first and last particular time field...
				Page 322 lines 19-21.	In Fig. 5, decoder, 203, which is part of the signal processor system of the station of Fig. 5, not only monitors the operation of its associated apparatus, microcomputer, 205, but also controls said apparatus, in the fashions described above, in the execution of SPAM controlled functions. Decoder, 203, has means for detecting SPAM information in any programming transmission inputted to its associated apparatus, microcomputer, 205, and not only for detecting and transferring to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message of said transmissions but also for inputting selected detected information to microcomputer, 205, and for controlling microcomputer, 205, in selected fashions. (Fig. 5 also shows that decoder, 203, has capacity for inputting detected information to signal processor, 200, and for receiving from and transferring control information to signal processor, 200.)
				Page 271 lines 33 to 35.	For example, in the case of the "Wall Street Week" program, transmitting the first and second SPAM messages of example #3 In examples #3, ..., the transmission of SPAM signal information causes signal processor, 200, to transfer signal record information by telephone to remote station....
communicating said time information from said step of processing to said remote station.	Column 17 lines 12-17.	Signal divider, 139, monitors the use of signals rather than the use of programming. Every instruction or information signal transmitted from processor, 140, to		Page 315 line 25 to page 316 line 6.	In Fig. 5, decoder, 203, which is part of the signal processor system of the station of Fig. 5, not only monitors the operation of its associated apparatus, microcomputer, 205, but

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			microcomputer, 142, is also transmitted to signal processor, 130, to be handled, recorded, and transmitted to a remote site with all other monitor information.		also controls said apparatus, in the fashions described above, in the execution of SPAM controlled functions. Decoder, 203, has means for detecting SPAM information in any programming transmission inputted to its associated apparatus, microcomputer, 205, and not only for detecting and transferring to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message of said transmissions but also for inputting selected detected information to microcomputer, 205, in and for controlling microcomputer, 205, in selected fashions. (Fig. 5 also shows that decoder, 203, has capacity for inputting detected information to signal processor, 200, and for receiving from and transferring control information to signal processor, 200.)
				Page 322 lines 19-21.	For example, in the case of the "Wall Street Week" program, transmitting the first and second SPAM messages of example #3
				Page 271 lines 33 to 35.	In examples #3, ..., the transmission of SPAM signal information causes signal processor, 200, to transfer signal record information by telephone to remote station....
127. The method of claim 122, wherein said identified at least one of said resource and said control signal is	Column 15 lines 57-62.		The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Page 315 lines 20-24.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
				Page 44 lines 26-32.	Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes

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a resource which performs one of the functions of communicating and responding to a plurality of control signals, said method further comprising the steps of:				subsubscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.	
				Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ...	
				... monitor information that identifies what programming is available, ...	
				The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...	
				At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.	
				In the preferred embodiment, each one of said decoders is located at a point in the circuitry of its associated apparatus where said one receives (so as to detect all SPAM information on) the information of the selected frequency, channel or transmission to which its	

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selecting information designating at least one of said plurality of control signals; and	Column 15 lines 57-62.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.		Page 315 lines 20-24. Page 44 lines 26-32.	associated apparatus is tuned. Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned. Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below. Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and ... unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ...
				Page 49 line 26 to Page 50 line 4.	... monitor information that identifies what programming is available, ...
	Column 4 lines 5-6.	These techniques employ signals embedded in programs.		Page 28 lines 26-27.	The present invention employs signals embedded in programming.
	Column 17 lines 13-16.	Every instruction or information signal transmitted from processor, 140, to microcomputer, 142, is also transmitted to signal processor, 130, ...		Page 13 lines 25-26.	Decoder, 203, has means for detecting SPAM information in any programming transmission inputted to its associated apparatus, microcomputer, 205, and not only for
				Page 315 line 30 to page 316 line 6.	

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	<p><i>For example,</i> Column 19 lines 43-44.</p>	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p>	<p>detecting and transferring to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message of said transmissions but also for inputting selected detected information to microcomputer, 205, in and for controlling microcomputer, 205, in selected fashions. (Fig. 5 also shows that decoder, 203, has capacity for inputting detected information to signal processor, 200, and for receiving from and transferring control information to signal processor, 200.)</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p>
<p>communicating said selected information from said step of selecting to said remote station.</p>	<p>Column 17 lines 12-17.</p>	<p>Signal divider, 139, monitors the use of signals rather than the use of programming. Every instruction or information signal transmitted from processor, 140, to microcomputer, 142, is also transmitted to signal processor, 130, to be handled, recorded, and transmitted to a remote site with all other monitor information.</p>	<p>Page 21 lines 23-24.</p> <p>In Fig. 5, decoder, 203, which is part of the signal processor system of the station of Fig. 5, not only monitors the operation of its associated apparatus, microcomputer, 205, but also controls said apparatus, in the fashions described above, in the execution of SPAM controlled functions. Decoder, 203, has means for detecting SPAM information in any programming transmission inputted to its associated apparatus, microcomputer, 205, and not only for detecting and transferring to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message of said transmissions but also for inputting selected detected information to microcomputer, 205, in and for controlling microcomputer, 205, in selected fashions. (Fig. 5 also shows that decoder, 203, has capacity for inputting detected information to signal processor, 200, and for receiving from and transferring control information to signal processor, 200.)</p>
			<p>Page 322 lines 19-21.</p> <p>For example, in the case of the "Wall Street</p>

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			Page 271 lines 33 to 35.	<p>Week" program, transmitting the first and second SPAM messages of example #3</p> <p>In examples #3, ..., the transmission of SPAM signal information causes signal processor, 200, to transfer signal record information by telephone to remote station....</p>
128. The method of claim 122, wherein said identified at least one of said resource and said control signal is	Column 15 lines 57-62.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	<p>Page 315 lines 20-24.</p> <p>Page 44 lines 26-32.</p> <p>Page 49 line 26 to Page 50 line 4.</p> <p>Page 28 lines 26-27.</p>	<p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p> <p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times ... <p>... monitor information that identifies what programming is available, ...</p>

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a control signal which performs one of the functions of processing and communicating	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.
a plurality of resources, said method further comprising the steps of:	Column 12 lines 50-53.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations or embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.	Page 84 lines 26-28. Page 28 lines 26-27. Page 49 lines 26-27. Page 337 lines 12-19.

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selecting information designating at least one of said plurality of resources; and	Column 16 lines 35-41.	Recorder, 135, might receive the programming over Manhattan Cable TV channel 4 and record the programming from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each discrete bit of this information could be conveyed to recorder, 135, in a signal unit or units in the programming so received and recorded.	Page 319 line 33 to page 320 line 8.	Recorder, 217, might receive the programming over Manhattan Cable TV channel 4 and record the programming at the time of original broadcast transmission--from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each discrete bit of this information could be transmitted to the subscriber station of Fig. 5 in meter-monitor information ... embedded in the transmitted programming. So embedding and transmitting said meter-monitor information would cause recorder, 217, to record said information.
communicating said selected information from said step of selecting to said remote station.	Column 16 lines 45-47. Column 17 lines 6-9.	This time, TV signal decoder, 31, identifies the embedded signals and transfers them to signal processor, 131. At a time when buffer/comparator, 14, determines in a predetermined fashion that it will receive no further duplicate signals, it transfers the full signal string to recorder, 16.	Page 320 lines 27-31. Page 179 lines 14-24.	So playing back and transmitting the recorded programming to monitor, 202M, would cause TV signal decoder, 145, to detect said meter-monitor information and transfer said information, together with appropriate source mark information, to signal processor, 131.... Automatically, said process-monitor-info instructions cause onboard controller, 14A, in a predetermined fashion, to locate the instance of "program unit identification code" information in said record of the prior programming displayed at monitor, 202M, and to compare said first named instance of "program unit identification code" information to said second named instance. No match results. Not resulting in a match causes onboard controller, 14A, to cause signal processor, 200, to record said record of prior programming at recorder, 16.
	Column 17 lines 16-17.	... to be handled, recorded, and transmitted to a remote site with all other monitor information.	Page 28 lines 25-35	[Signal processor ... 200 in Fig. 7 ... and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for

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		Column 17 lines 13-16.	Every instruction or information signal transmitted from processor, 140, to microcomputer, 142, is also transmitted to signal processor, 130, ...	<p>Page 28 lines 26-27.</p> <p>Page 315 line 30 to page 316 line 6.</p>	<p>... monitor information that identifies what programming is available, ...</p> <p>Decoder, 203, has means for detecting SPAM information in any programming transmission inputted to its associated apparatus, microcomputer, 205, and not only for detecting and transferring to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message of said transmissions but also for inputting selected detected information to microcomputer, 205, in and for controlling microcomputer, 205, in selected fashions. (Fig. 5 also shows that decoder, 203, has capacity for inputting detected information to signal processor, 200, and for receiving from and transferring control information to signal processor, 200.)</p>
selecting information designating at least one of said plurality of devices; and		Column 17 lines 17-21.	In a predetermined fashion, signal processor, 130, identifies and marks the source of signals as coming from a device, 139, monitoring signal usage rather than programming usage and viewership.	<p>Page 322 lines 19-26.</p> <p>Page 174 lines 4-23.</p>	<p>For example, in the case of the "Wall Street Week" program, transmitting the first and second SPAM messages of example #3 (which are not encrypted) will cause not only decoder, 203, to process the meter-monitor information of said messages and transmit the aforementioned 1st monitor information (#3) and 2nd monitor information (#3), via the monitor information bus means of Fig. 5, to onboard controller, 14A.</p> <p>Under control of said instructions, said match causes control processor, 39J, ... to transfer to said buffer/comparator, 14, header information that identifies a transmission of monitor information then particular decoder-203 information that is the source mark of said decoder, 203, ... then all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said</p>

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communicating said selected information from said step of selecting to said remote station.	Column 17 lines 16-17.	... to be handled, recorded, and transmitted to a remote site with all other monitor information.		Page 28 lines 25-35	received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3)."
					[Signal processor ... 200 in Fig. 7 ... and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
130. The method of claim 122, wherein the stored evidence information performs one of the functions of identifying and designating at least one of:	Column 16 lines 51-61.	Signal processor, 130, would probably receive these signals from decoders, 131, 136, 138, 143, 145, 147, 149, and 150) at its buffer/comparator unit, 14 (referring to FIG. 1),		Page 315 lines 6-10. Page 32 lines 24-33.	Fig. 5 shows each decoder as having capacity for transferring monitor information to signal processor, 200, by bus communications means. Said information is received (and processed) at signal processor, 200, by the onboard controller, 14A, (In circumstances where information collecting and processing functions are extensive--for example, when a given buffer/comparator, 14, must collect monitor information at a subscriber station with apparatus and/or communications flows that are extensive and complex--buffer/comparator, 14, may operate under control of a dedicated, so-called "on-board" controller, 14A, at

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			<p>buffer/comparator, 14, which is preprogrammed with appropriate control instructions and is controlled by controller, 20, similarly to the fashion in which controller, 12 is controlled by controller, 20.)</p> <p>...that the source mark information identifies decoder, 282, rather than decoder, 203.</p> <p>Under control of said instructions, said match causes control processor, 39J, ... to transfer to said buffer/comparator, 14, header information that identifies a transmission of monitor information then particular decoder-203 information that is the source mark of said decoder, 203,....</p> <p>Automatically, said instructions cause onboard controller, 14A, to compare the information at said source-mark-@14A memory, in a predetermined fashion, with particular pre-entered source-identification mark information that onboard controller, 14A, retains in memory associated with its pre-entered signal records of monitor information. A match results with that particular decoder-203 source mark information that is associated with the aforementioned record of the prior programming displayed at monitor, 202M.</p> <p>Then said process-monitor-info instructions cause onboard controller, 14A, to initiate a new monitor record that reflects the new "Wall Street Week" programming.</p> <p>...creating a meter record that records the decryption....</p> <p>Automatically, said instructions cause onboard controller, 14A, in a predetermined</p>	<p>buffer/comparator, 14, which is preprogrammed with appropriate control instructions and is controlled by controller, 20, similarly to the fashion in which controller, 12 is controlled by controller, 20.)</p> <p>...that the source mark information identifies decoder, 282, rather than decoder, 203.</p> <p>Under control of said instructions, said match causes control processor, 39J, ... to transfer to said buffer/comparator, 14, header information that identifies a transmission of monitor information then particular decoder-203 information that is the source mark of said decoder, 203,....</p> <p>Automatically, said instructions cause onboard controller, 14A, to compare the information at said source-mark-@14A memory, in a predetermined fashion, with particular pre-entered source-identification mark information that onboard controller, 14A, retains in memory associated with its pre-entered signal records of monitor information. A match results with that particular decoder-203 source mark information that is associated with the aforementioned record of the prior programming displayed at monitor, 202M.</p> <p>Then said process-monitor-info instructions cause onboard controller, 14A, to initiate a new monitor record that reflects the new "Wall Street Week" programming.</p> <p>...creating a meter record that records the decryption....</p> <p>Automatically, said instructions cause onboard controller, 14A, in a predetermined</p>
	<p>in a predetermined fashion that would permit signal processor, 130, to identify which decoder the individual signals come from</p>	<p>Page 322 lines 33-35.</p> <p>Page 174 lines 4-17.</p> <p>Page 178 lines 27-35.</p>	<p>Page 180 lines 1-3.</p> <p>Page 297 line 15.</p> <p>Page 180 lines 4-15.</p>	

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					<p>fashion, to delete ... except the source mark information associated with said record; to record information of said first named instance of "program unit identification code" information (which is the "program unit identification code" of said "Wall Street Week" program to a particular "program unit identification code" location at said record location; to select particular information located at said SPAM-input-signal-@14A register memory and record information at said record location; to select particular preprogrammed record....</p> <p>In a predetermined fashion, onboard controller, 14A, also records in a particular monitor record field location at said record location a particular display unit identification code that identifies monitor, 202M, as the display apparatus of said new monitor record. In a predetermined fashion, signal processor, 200, records date and time information received from clock, 18, in first and last particular time field...</p> <p>Recorder, 217, might receive the programming over Manhattan Cable TV channel 4 and record the programming at the time of original broadcast transmission--from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each discrete bit of this information could be transmitted to the subscriber station of Fig. 5 in meter-monitor information ... embedded in the transmitted programming. So embedding and transmitting said meter-monitor information would cause recorder, 217, to record said information.</p>
		<p>identify the individual decoder, 131, 136, 138, 143, 145, 147, 149, or 150 and the time of receipt at signal processor, 130.</p> <p>Recorder, 135, might receive the programming over Manhattan Cable TV channel 4 and record the programming from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each discrete bit of this information could be conveyed to recorder, 135, in a signal unit or units in the programming so received and recorded.</p>	<p>Page 181 lines 8-14.</p> <p>Page 319 line 33 to page 320 line 8.</p>		
(1) a mass medium program;	<p>Column 16 lines 35-41.</p> <p>Column 15 lines 62-63.</p>	<p>[The signals for which the decoders are monitoring] may convey unique identifier codes for each program or commercial.</p>	<p>Page 49 lines 26-28.</p>		<p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p>

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(2) a proper use of programming:	Column 16 lines 35-41.	Recorder, 135, might receive the programming over Manhattan Cable TV channel 4 and record the programming from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each discrete bit of this information could be conveyed to recorder, 135, in a signal unit or units in the programming so received and recorded.	Page 50 lines 6-7. Page 319 line 33 to page 320 line 8.	...unique identifier codes for each program unit (including commercials);.... Recorder, 217, might receive the programming over Manhattan Cable TV channel 4 and record the programming at the time of original broadcast transmission--from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each discrete bit of this information could be transmitted to the subscriber station of Fig. 5 in meter-monitor information ... embedded in the transmitted programming. So embedding and transmitting said meter-monitor information would cause recorder, 217, to record said information.	
	Column 18 lines 30-35.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...	Page 408 lines 18-29 Page 414 lines 13-27	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion. Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.	
			Page 15 lines 16-22	The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections.	

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				<p>Page 411 lines 10-15</p> <p>Page 418 line 23 to page 419 line 15.</p>	<p>The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p>
(3) a transmission station;	Column 15 lines 60-62.	[The signals for which the decoders are monitoring] may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.		<p>Page 49 lines 26-28.</p> <p>Page 50 lines 1-4.</p>	<p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <p>... origins of transmissions (eg., network so source stations, broadcast stations, cable head end stations); dates and times ...</p>
(4) a receiver station;	Column 16 lines 56-61.	... and, in a predetermined fashion, create a signal string		<p>Page 180 lines 1-3.</p> <p>Page 297 line 15.</p>	<p>Then said process-monitor-info instructions cause onboard controller, 14A, to initiate a new monitor record that reflects the new "Wall Street Week" programming.</p> <p>...creating a meter record that records the decryption....</p>

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			by appending digital information to the received signal which information might	Page 180 lines 4-15.	Automatically, said instructions cause onboard controller, 14A, in a predetermined fashion, to delete ... except the source mark information associated with said record; to record information of said first named instance of "program unit identification code" information (which is the "program unit identification code" of said "Wall Street Week" program to a particular "program unit identification code" location at said record location; to select particular information located at said SPAM-input-signal-@14A register memory and record information at said record location; to select particular preprogrammed record....
			identify the individual decoder, 131, 136, 138, 143, 145, 147, 149, or 150 and the time of receipt at signal processor, 130.	Page 181 lines 8-14.	In a predetermined fashion, onboard controller, 14A, also records in a particular monitor record field location at said record location a particular display unit identification code that identifies monitor, 202M, as the display apparatus of said new monitor record. In a predetermined fashion, signal processor, 200, records date and time information received from clock, 18, in first and last particular time field...
(5)	a network;	Column 16 lines 32-35.	For example, a person might instruct video cassette recorder, 135, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.	Page 319 lines 30-33.	For example, a subscriber might instruct video recorder/player, 217, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.
		Column 16 lines 39-41.	Each discrete bit of this information could be conveyed to recorder, 135, in a signal unit or units in the programming so received and recorded.	Page 320 lines 2-8.	Each discrete bit of this information could be transmitted to the subscriber station of Fig. 5 in meter-monitor information ... embedded in the transmitted programming. So embedding and transmitting said meter-monitor information would cause recorder, 217, to record said information.

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(6) a broadcast station;		Column 15 lines 60-62.	[The signals for which the decoders are monitoring] may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Page 49 lines 26-28. Page 50 lines 1-4.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... origins of transmissions (eg., network so source stations, broadcast stations, cable head end stations); dates and times ...
(7) a channel on a cable system;		Column 16 lines 35-41.	Recorder, 135, might receive the programming over Manhattan Cable TV channel 4 and record the programming from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each discrete bit of this information could be conveyed to recorder, 135, in a signal unit or units in the programming so received and recorded.	Page 319 line 33 to page 320 line 8.	Recorder, 217, might receive the programming over Manhattan Cable TV channel 4 and record the programming at the time of original broadcast transmission--from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each discrete bit of this information could be transmitted to the subscriber station of Fig. 5 in meter-monitor information ... embedded in the transmitted programming. So embedding and transmitting said meter-monitor information would cause recorder, 217, to record said information.
(8) a time of transmission;		Column 15 lines 60-62.	[The signals for which the decoders are monitoring] may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Page 49 lines 26-28. Page 50 lines 1-4.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... origins of transmissions (eg., network so source stations, broadcast stations, cable head end stations); dates and times ...
(9) a unique identifier datum;		Column 15 lines 62-63.	[The signals for which the decoders are monitoring] may convey unique identifier codes for each program or commercial.	Page 49 lines 26-28. Page 50 lines 6-7.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique identifier codes for each program unit (including commercials);....
(10) a source or supplier of data;		Column 15 lines 63-65.	In the case of data transmitted to the micro-computer, [the signals for which	Page 49 lines 26-28.	Meter-monitor segments contain meter information and/or monitor information.

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			the decoders are monitoring] may be unique codes that identify the source and suppliers of the data.		Examples of categories of such information include: unique codes that identify the sources and suppliers of computer data.
(11) at least one of a distributor and an advertisement; and	Column 15 lines 65-68.	In the case of data received at the printer, [the signals for which the decoders are monitoring] may identify publications, articles, publishers, distributors, advertisements, etc.		Page 50 lines 19-20. Page 321 lines 1-6.	Prerecorded, commercially distributed video and audio tapes, videodiscs, so-called "compact discs" of audio, and so-called "CD ROM" discs of data can also contain unique codes, embedded in the prerecorded programming, that identify the use and usage of said programming when said tapes or discs are played. For example, laser disc player, 232, can For example, another of the aforementioned discounts and cents-off coupon specials is of a particular product ... that is advertised ... At printer, 221, the printed so-called "hard copy" of said offer and coupon information emerges as: 15 cents off 15 cents off . . Nabisco Zweiback Teething Toast
(12) an indication of a payment obligation.	column 20 lines 49-58.	...and thence to printer, 221, for printing. Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the		Page 49 lines 26-28. Page 50 lines 14-17.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ...unique codes for programming (other than programming identified by program unit

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		<p>recipe, itself, has been received.</p> <p>Subsequently, when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site, that site can determine for billing purposes that the recipe was, first, ordered and, second, delivered.</p>		<p>codes) whose use obligates users to make payments (eg., royalties and residuals);</p>
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<p>131. The method of claim 122, wherein at least one of said resource and said control signal is received from a local source, said method further comprising the step of:</p>	Column 16 lines 43-47.	<p>Subsequently, the person might play the recorded programming on TV set, 132, from 10:45 PM to 11:15 PM the same evening. This time, TV signal decoder, 31, identifies the embedded signals and transfers them to signal processor, 131.</p>	Page 320 lines 24-31.	<p>Subsequently, the subscriber might play back the recorded programming and view said programming on TV monitor, 202M, from 10:45 PM to 11:15 PM the same evening. So playing back and transmitting the recorded programming to monitor, 202M, would cause TV signal decoder, 145, to detect said meter-monitor information and transfer said information, together with appropriate source mark information, to signal processor, 131 ...</p>
<p>storing one of a code and a datum which is operative to identify one of said resource and said control signal.</p>	Column 16 lines 32-41.	<p>For example, a person might instruct video cassette recorder, 135, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City. Recorder, 135, might receive the programming over Manhattan Cable TV channel 4 and record the programming at the time of original broadcast transmission--from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each discrete bit of this information could be conveyed to recorder, 135, in a signal unit or units in the programming so received and recorded.</p>	<p>Page 319 line 30 to page 320 line 8.</p>	<p>For example, a subscriber might instruct video recorder/player, 217, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City. Recorder, 217, might receive the programming over Manhattan Cable TV channel 4 and record the programming at the time of original broadcast transmission--from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each discrete bit of this information could be transmitted to the subscriber station of Fig. 5 in meter-monitor information ... embedded in the transmitted programming. So embedding and transmitting said meter-monitor information would cause recorder, 217, to record said information.</p>

<p>132. A method for gathering an identifying</p>	Column 20 lines 49-54.	<p>Other signal decoder, 227, identifies a signal in the transmission received by</p>	<p>Page 473 line 29 to page 474 line 1</p>	<p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said</p>
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signal	printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received.	generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
from a plurality of identifying signals generated	Buffer/comparator, 14, is connected to clock, 18, and has means for adding information such as time of receipt, for example, to signals.	At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.
by passing a control signal at a receiver station to at least one controlled device,	This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	Buffer/comparator, 14, receives time information from clock, 18, and has means for incorporating time information into signal records.
	Column 8 lines 2-4.	Page 314 line 30-33.
	Column 20 lines 31-36.	Page 471 line 26 to page 472 line 17.
		Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...
		(An alternate method for inputting said second

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			<p>message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p> <p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.</p> <p>Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.</p> <p>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input</p>
said receiver station having	Column 17 lines 47-53.		<p>page 477 line 8.</p> <p>Page 477 lines 8-17.</p> <p>Page 390 lines 30-35.</p> <p>Page 396 lines 8-10.</p> <p>Page 29 lines 4-7.</p>
an input and	Column 6 lines 23-26.	<p>FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.</p> <p>A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio</p>	

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an output,	Column 20 lines 48-49.	programing and a broadcast television input is shown in Figure 1.	Page 475 lines 1-2.	that conveys both television and radio programming and a broadcast television input.	
a processor and	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.	
a storage device, said method comprising the steps of:	Column 20 lines 54-56.	... when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site, ...	Page 28 lines 25-35.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...	
receiving a control signal at said receiver station;	Column 20 lines 27-31.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 ...	Page 471 line 26 to page 472 line 17.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.	
				Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller,	

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generating based on said step of passing said control signal, a plurality of signals that identify characteristics of said control signal in said step of passing;				Page 477 lines 8-17.	decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station. In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...
	Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.		Page 472 lines 23-27.	... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information. Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
	Column 20 lines 49-54.	Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received.		Page 473 line 29 to page 474 line 1	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to

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			Page 314 line 30-33.	increment the information of said signal record of meter information in the fashion described above. At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.
selecting at least one identifying signal from said plurality of identifying signals based on said step of generating said identifying signals; and	Column 20 lines 42-45.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer ...	Page 472 lines 23-27.	... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
storing said at least one identifying signal based on said step of selecting said at least one identifying signal in said storage device.	Column 20 lines 42-45.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer ...	Page 472 lines 23-27.	... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.

133. The method of claim 132, further comprising the step of communicating said stored at least one identifying signal based on said step of storing from said receiver station to	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	Page 28 lines 25-35.	[Signal processor in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
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	that site can determine for billing purposes that the recipe was,			Page 44 lines 26-30.	... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...
	first, ordered			Page 471 lines 26-31.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,...
				Page 473 lines 3-8.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...
				Page 472 lines 23-27 with	Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
				Page 471 lines 14-16.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...
	and, second, delivered.			Page 473 line 29 to Page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.

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an external data collection station.	Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.	Page 33 lines 18-20. Page 273 lines 4-6. Page 273 lines 21-25.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor ... The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. ... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.
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134. The method of claim 133, further comprising the step of: generating a bill one of at and from said at least one remote data collection station based on said at least one identifying signal communicated to said external data collection station.	Column 20 lines 56-57.	... that site can determine for billing purposes that the recipe was, ...	Page 44 lines 26-30. Page 471 lines 26-31. Page 473 lines 3-8.	... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ... Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information, ... One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...
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135. The method of claim 132, wherein said	Column 15 lines 57-60.	The signals for which the decoders are monitoring are likely to be unique digital	Page 315 lines 20-24.	Each one of said decoders is preprogrammed to detect and transfer to said onboard
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at least one identifying signal identifies a source of said control signal.	codes that may identify each programing or data unit received and the source of each.	<p>controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p> <p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. <p>... monitor information that identifies what programming is available, ...</p>
		<p>Page 44 lines 26-32.</p> <p>Page 49 line 26 to page 50 line 20.</p> <p>Page 28 lines 26-27.</p>

136. The method of claim 132, wherein said at least one identifying signal identifies a supplier of said control signal.	Column 15 lines 63-65.	<p>In the case of data transmitted to the micro-computer, [the signals for which the decoders are monitoring] may be unique codes that identify the source and suppliers of the data.</p>	<p>Page 49 lines 26-28.</p> <p>Page 50 lines 19-20.</p>	<p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ...</p> <p>... unique codes that identify the sources and suppliers of computer data.</p>
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137. The method of claim 132, wherein said at least one identifying	Column 20 lines 42-45.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that	Page 472 lines 23-27.	<p>... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14,</p>
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signal identifies a content of said control signal.	Column 20 lines 31-33.	the 567 order was placed by the viewer that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 16-17. Page 472 lines 27-32.	of signal processor, 200, which record contains particular program unit information and TV567# information. controller, 20, to determine that TV567# information exists at said last-local-input-# memory ... (At stations where TV567# information does not exist at last-local-input-# memory of the controllers, 20, said instructions cause said controllers, 20, to cease executing and delete all information of said instructions without placing any information at the decoders, 145 and 203, ...

138. The method of claim 132, wherein said at least one identifying signal identifies one of a time and a period of time.	Column 8 lines 2-4.	Buffer/comparator, 14, is connected to clock, 18, and has means for adding information such as time of receipt, for example, to signals.	Page 32 lines 14-16.	Buffer/comparator, 14, receives time information from clock, 18, and has means for incorporating time information into signal records.
	Column 16 line 64 to column 17 line 4.	It may compare each signal from a given source such as decoder, 131, with other signals received earlier from the same source.	Page 178 lines 27-35.	Automatically, said instructions cause onboard controller, 14A, to compare the information at said source-mark-@14A memory, in a predetermined fashion, with particular pre-entered source-identification mark information that onboard controller, 14A, retains in memory associated with its pre-entered signal records of monitor information. A match results with that particular decoder-203 source mark information that is associated with the aforementioned record of the prior programming displayed at monitor, 202M.
		It may only count incoming duplicate signals	Page 32 lines 9-12.	To avoid overloading digital recorder, 16, with duplicate data, buffer/comparator, 14, has means for counting and/or discarding duplicate instances of particular signal

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		<p>or it may append a time code to the end of the basic signal string formed around the first received signal</p> <p>and alter this time designation each time a new duplicate signal is identified so that the time code identifies the time of receipt of the last duplicate signal.</p>	<p>Page 181 lines 12-15.</p> <p>Page 191 lines 11-21.</p>	<p>information ...</p> <p>In a predetermined fashion, signal processor, 200, records date and time information received from clock, 18, in first and last particular time field locations....</p> <p>... onboard controller, 14A, to locate the instance of "program unit identification code" information at said SPAM-input-signal-@14A register memory, in the fashion described above; to locate the instance of "program unit identification code" information in the aforementioned new monitor record; and to compare said first named instance to said second named instance. A match results. Under control of said process- monitor-info instructions, said match causes onboard controller, 14A, to record date and time information, received from clock, 18, at the aforementioned last particular time field of said new monitor record and, in a</p>
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<p>139. The method of claim 132, wherein said signal identifies a function performed at said receiver station</p> <p>in consequence of said control signal.</p>	<p>Column 20 lines 45-46.</p> <p>Column 20 lines 37-42.</p>	<p>... and all necessary equipment was enabled.</p> <p>The signal transmission from processor, 204, also passes a signal word to signal processor, 200,</p>	<p>Page 473 line 29 to page 474 line 1.</p> <p>Page 477 lines 8-23.</p>	<p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-</p>
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			<p>invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...</p> <p>By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")</p> <p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p>
		<p>Page 281 lines 1-6.</p>	<p>Page 282 line 2 to page 283 line 33.</p>
	<p>which, in a predetermined fashion, signal processor, 200, decrypts and transfers</p>		<p>Page 478 lines 1-5.</p>
		<p>to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.</p>	

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140. The method of claim 132, wherein said at least one identifying signal identifies programming outputted at said receiver station	Column 20 lines 49-54.	Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received.	Page 473 line 29 to page 474 line 1	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.	
	Column 15 lines 57-60.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each.	Page 314 line 30-33.	At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.	
			Page 315 lines 20-24.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.	
			Page 44 lines 26-32.	Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.	
			Page 49 line 26 to page 50 line 20.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and	

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in consequence of said control signal.	Column 20 lines 33-36.	... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	<p>suppliers of computer data.</p> <p>... monitor information that identifies what programming is available, ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....</p>	<p>Page 28 lines 26-27.</p> <p>Page 476 line 34 to page 477 line 8.</p> <p>Page 477 lines 8-17.</p>	<p>... monitor information that identifies what programming is available, ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....</p>
141. The method of claim 132, wherein said signal identifies apparatus controlled at said receiver station	Column 20 lines 45-46.	... and all necessary equipment was enabled.	<p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal</p>	<p>Page 473 line 29 to page 474 line 1.</p>	<p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal</p>

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in consequence of said control signal.	Column 20 lines 37-42.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200,		Page 477 lines 8-23.	record of meter information in the fashion described above. In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ... By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")
		which, in a predetermined fashion, signal processor, 200, decrypts and transfers		Page 281 lines 1-6.	... the information of said segments is encrypted prior to transmission ... The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ... Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".
				Page 282 line 2 to page 283 line 33.	

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		to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.	Page 478 lines 1-5.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
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142. The method of claim 132, further comprising the step of discarding at least one of said plurality of identifying signals.	Column 7 line 67 to column 8 line 1.	To avoid overloading digital recorder, 16, with duplicate data, buffer/comparator, 14, has means for counting and discarding duplicate signals.	Page 32 lines 9-12.	To avoid overloading digital recorder, 16, with duplicate data, buffer/comparator, 14, has means for counting and/or discarding duplicate instances of particular signal information....
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143. The method of claim 142, wherein said discarded at least one of said plurality of identifying signals includes a duplicate identifying signal.	Column 16 line 64 to column 17 line 4.	It may compare each signal from a given source such as decoder, 131, with other signals received earlier from the same source.	Page 178 lines 27-35.	Automatically, said instructions cause onboard controller, 14A, to compare the information at said source-mark-@14A memory, in a predetermined fashion, with particular pre- entered source-identification mark information that onboard controller, 14A, retains in memory associated with its pre-entered signal records of monitor information. A match results with that particular decoder-203 source mark information that is associated with the aforementioned record of the prior programming displayed at monitor, 202M.
		It may only count incoming duplicate signals	Page 32 lines 9-12.	To avoid overloading digital recorder, 16, with duplicate data, buffer/comparator, 14, has means for counting and/or discarding duplicate instances of particular signal information....
		or it may append a time code to the end of the basic signal string formed around the first received signal	Page 181 lines 12-15.	In a predetermined fashion, signal processor, 200, records date and time information received from clock, 18, in first and last

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		and alter this time designation each time a new duplicate signal is identified so that the time code identifies the time of receipt of the last duplicate signal.	Page 191 lines 11-21.	<p>particular time field locations....</p> <p>... onboard controller, 14A, to locate the instance of "program unit identification code" information at said SPAM-input-signal-@14A register memory, in the fashion described above; to locate the instance of "program unit identification code" information in the aforementioned new monitor record; and to compare said first named instance to said second named instance. A match results. Under control of said process- monitor-info instructions, said match causes onboard controller, 14A, to record date and time information, received from clock, 18, at the aforementioned last particular time field of said new monitor record and, in a</p>
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144. The method of claim 132, wherein said step of generating includes creating said at least one identifying signal by appending digital information.	Column 16 lines 56-61.	<p>... and, in a predetermined fashion, create a signal string</p> <p>by appending digital information to the received signal which information might</p>	<p>Page 180 lines 1-3.</p> <p>Page 297 line 15.</p> <p>Page 180 lines 4-15.</p>	<p>Then said process-monitor-info instructions cause onboard controller, 14A, to initiate a new monitor record that reflects the new "Wall Street Week" programming.</p> <p>... creating a meter record that records the decryption ...</p> <p>Automatically, said instructions cause onboard controller, 14A, in a predetermined fashion, to delete ... except the source mark information associated with said record; to record information of said first named instance of "program unit identification code" information (which is the "program unit identification code" of said "Wall Street Week" program to a particular "program unit identification code" location at said record location; to select particular information located at said SPAM-input- signal-@14A register memory and record information at said record location; to select particular</p>
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			identify the individual decoder, 131, 136, 138, 143, 145, 147, 149, or 150 and the time of receipt at signal processor, 130.	Page 181 lines 8-14.	preprogrammed record ... In a predetermined fashion, onboard controller, 14A, also records in a particular monitor record field location at said record location a particular display unit identification code that identifies monitor, 202M, as the display apparatus of said new monitor record. In a predetermined fashion, signal processor, 200, records date and time information received from clock, 18, in first and last particular time field ...
145. The method of claim 144, wherein said appended digital information includes a first of said plurality of signals that identify characteristics.	Column 16 lines 59-61.	... identify the individual decoder, 131, 136, 138, 143, 145, 147, 149, or 150 and the time of receipt at signal processor, 130.		Page 181 lines 8-14.	In a predetermined fashion, onboard controller, 14A, also records in a particular monitor record field location at said record location a particular display unit identification code that identifies monitor, 202M, as the display apparatus of said new monitor record. In a predetermined fashion, signal processor, 200, records date and time information received from clock, 18, in first and last particular time field ...
146. The method of claim 132, wherein said step of generating includes counting.	Column 16 lines 66-67.	[Buffer/comparator, 14,] may only count incoming duplicate signals ...		Page 32 lines 9-12.	To avoid overloading digital recorder, 16, with duplicate data, buffer/comparator, 14, has means for counting and/or discarding duplicate instances of particular signal information ...
147. The method of claim 132, wherein said step of generating results in a record.	Column 12 lines 45-53.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the		Page 337 lines 1-19.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal

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		<p>programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the informations that the Federal Communications Commission requires broadcast station operators to maintain as station logs.</p>		<p>processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.</p>
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<p>148. A method of communicating subscriber station information including identifying data from a subscriber station to at least one remote data collection station, said method comprising the steps of: inputting one of a viewer's and participant's reaction to mass medium programming at a subscriber station;</p>	<p>Column 20 lines 19-26.</p>	<p>Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further ...</p>	<p>Page 471 lines 6-25.</p>	<p>Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.</p>
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receiving at said subscriber station an indication of at least one of a control signal to process and	Column 20 lines 27- 31.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 ...	Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory. Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
an output to deliver in consequence of	Column 20 lines 19-23.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."	Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#".
a specific subscriber input;	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local

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		input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.	
determining a presence of said specific subscriber input at said subscriber station by processing	Column 20 lines 31-33.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...	Page 472 lines 15-17.
said one of a viewer's and participant's reaction to mass medium programming;	Column 20 lines 26-27.	Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.	Page 471 lines 22-25.
	Column 20 lines 23-26.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.	Page 471 lines 14-21.
processing a control signal, based on said step of determining, said control signal causing an effect of controlling one or more receiver station apparatus;	Column 20 lines 31-37.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...	Page 471 line 26 to page 472 line 17.

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			<p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p> <p>... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...</p>
			<p>476 line 34 to page 477 line 8.</p> <p>Page 477 lines 8-17.</p> <p>Page 474 lines 3-7.</p>

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processing at least one of		Column 20 line 49-52.	Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16.	Page 473 line 29 to page 474 line 1	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
code and		Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ...	Page 314 line 30-33.	At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.
data to		Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 32 to page 15 line 2.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ... The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
serve as evidence of		Column 20 lines 53-54.	This signal indicates that the recipe, itself, has been received.	Page 473 line 29 to page 474 line 1	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.

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passing said control signal to at least one controllable device and of		Column 20 lines 53-54.	This signal indicates that the recipe, itself, has been received.	Page 473 line 29 to page 474 line 1	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
functioning of said controlled one or more receiver station apparatus		Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 473 lines 3-13. Page 477 lines 12-17.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe ... instructions selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission.... ... causes ... said decoder, 290, to detect and process properly the information of said second message. (Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
in response to said		Column 20 lines 31-37.	This signal instructs buffer/comparator, 8,	Page 475 lines 1-2. Page 471 line 26 to	Receiving said output information causes printer, 221, to print the information of said specific recipe and list. Five minutes later, said program originating

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control signal; and	that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form and instruct control means, 226, to activate printer, 221.	page 472 line 17.	studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ... (An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.
		476 line 34 to page 477 line 8.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming
		Page 477 lines 8-17.	

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				communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...	Page 474 lines 3-7.
transferring from said subscriber station to at least one remote data collection station a plurality of indicia confirming processing of said control signal and said control signal effect from said step of processing.	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,		[Signal processor in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.	Page 28 lines 25-35.
		that site can determine for billing purposes that the recipe was,		... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...	Page 44 lines 26-30.
				Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,....	Page 471 lines 26-31.

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		One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...	Page 473 lines 3-8.
first, ordered		Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.	Page 472 lines 23-27 with
and, second, delivered.		Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567# ...	Page 471 lines 14-16.
		Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe-... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.	Page 473 line 29 to Page 474 line 1.
	Column 20 lines 42-46.	...Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.	Page 472 lines 23-27.
		Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe-... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor,	Page 473 line 29 to page 474 line 1.

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	Column 20 lines 49-54.	Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received.	Page 473 line 29 to page 474 line 1	200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above. Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.	
			Page 314 line 30-33.	At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.	
149. The method of claim 148, wherein subscriber input is stored, said method further comprising the steps of:	Column 20 lines 26-27.	... to hold and process further in a predetermined fashion.	Page 471 lines 22-25.	Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.	
	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.	

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storing a subscriber instruction to receive one of a specific mass medium program,	Column 20 lines 26-27.	... to hold and process further in a predetermined fashion.	Page 471 lines 22-25.
	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.
	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 473 lines 3-13.
			One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe... instructions ...
			... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....
			... causes ... said decoder, 290, to detect and process properly the information of said second message.
			(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)

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data,	Column 18 lines 46-48.	... microprocessor, 205, is programmed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 475 lines 1-2.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.	
	Column 18 lines 56-58.	... signal processor, 200, to hold examples of the sought for unique signals in its buffer/ comparator, 8, and compare them with all incoming signals.	Page 420 lines 3-6.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.	
	Column 18 lines 52-55.	The news services preceded each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	Page 420 lines 6-20.	The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information that includes identification information of the particular stocks in said portfolio ... One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T".	
			Page 422 lines 33 to Page 423 line 4.	...said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information....	
			Page 420 line 32 to page 421 line 17.	Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ... In due course, said remote news-service-A station transmits a particular AT&T news item in a particular Transmit-AT&T-News-Item message that is in said Transmit- News-Item	

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computer control instructions; and	Column 19 lines 5-8.	In another example, microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast.	Page 428 lines 21-26.	SPAM message format and that consists of ... the "program unit identification code" information of said AT&T news item and subject matter information of said binary information of "T", appropriate padding bits, an information segment that contains said AT&T news item, and an end of file signal.	
	Column 19 lines 42-44.	Microcomputer, 205, is preprogramed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programing transmission.	Page 21 lines 20-24.	The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.	
	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 473 lines 3-13.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	
receiving one of said specific mass medium programs,			Page 477 lines 12-17.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe... instructions ...	
			Page 477 lines 23-29.	... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....	
			Page 478 lines 1-5.	... causes ... said decoder, 290, to detect and process properly the information of said second message.	
				(Whichever transmission method is employed the information of said second message can be	

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data,	Column 19 lines 35-41.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.		Page 475 lines 1-2.	encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
		Each weekday, microcomputer, 205, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio.		Page 449 lines 13-35.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list. Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.

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news items, and	Column 18 lines 58-67.	Signal processor, 200, scans sequentially all channels. When it identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205. In a predetermined fashion, either microcomputer, 205, or signal processor, 200, instructs tuner, 223, to set cable converter box, 222, to the proper channel, and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing.	<p>At the station of Fig. 7 and 7C, signal processor, 200, scans sequentially all channels at its switch, 1, mixer, 3, and decoder, 30, in the fashion of example #5.</p> <p>In due course, one instance of said Select-AT&T-News-Item message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30.</p> <p>Receiving said Select-AT&T-News-Item message causes said controller, 39, to transmit said message to the controller, 20, of said signal processor, 200. ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.</p> <p>Receiving said message causes said controller, 20, to cause a selected cable converter box, 222, to receive the transmission identified by said channel mark; ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>... causes controller, 20, to transmits particular instructions, via said control information transmission link, to said tuner, 223, thereby causing said tuner, 223, to tune its associated cable converter box, 222, the to</p>	<p>Page 422 line 23 to page 423 line 13.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 424 lines 3-9.</p>

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computer control instructions in accordance with said subscriber instruction.	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	Page 435 lines 16-25.
			the particular channel transmission of said multi-channel cable transmission that is identified by said channel mark. In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...
			Page 437 lines 1-6.
			Page 426 lines 10-18.
computer control instructions in accordance with said subscriber instruction.	Column 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205 ...	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then ... to cause said unit, 256, to record said AT&T news item.) When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
			Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is

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			<p>detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...</p>
		Page 37 line 26 to page 38 line 8.	
		Page 24 lines 5-6.	
		Page 451 lines 7-9.	

150. The method of claim 148, wherein said method of communicating uses a telephone interface.	Column 20 lines 54-56.	... when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site, ...	<p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p>
	Page 28 lines 25-35.		

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151. A method of controlling a remote intermediate mass medium program transmitter station to	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
		Page 59 lines 29-33.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
		Page 25 line 34 to page 26 line 1.	The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
		Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	
	Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrate one instance of such use. FIGS. 3A, 3B, and 3C illustrate the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
communicate mass medium program material to	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be

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a remote receiver station	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.
and controlling said remote receiver station to deliver an individualized mass medium program presentation, said method of controlling comprising the steps of:	Column 19 lines 63 to column 20 line 2.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	<p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well</p>

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(1) receiving mass medium programming				<p>known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p>	
				<p>Page 26 lines 4-11.</p>	
				<p>Page 451 line 3.</p>	
(1) receiving mass medium programming				<p>At this point, an instruction signal is generated in the television studio originating the programming ...</p>	
		Column 19 lines 60-62.		<p>Page 59 lines 29-33.</p>	
				<p>Page 25 lines 34-35.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-</p>	
				<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, ...</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.</p>	

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to be transmitted by the remote intermediate mass medium transmitter station and	Column 19 lines 59-60.	11. Page 25 lines 33-34. Page 267 lines 20-28 from example #5. Page 435 lines 16-25.	Then the host says, "And here is what your portfolio did."
	Column 19 lines 20-23.		<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select</p>
			<p>Page 436 line 9 to page 437 line 3.</p>

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delivering said mass medium programming to a transmitter;	Column 19 lines 60-63.	instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. ...to receive the transmission of cable channel 13;...	
	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.	Page 439 lines 14-15. Page 59 lines 29-33.
		At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.	Page 25 line 34 to page 26 line 1.
		The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...	Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and

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(2) receiving at least one receiver control signal at said remote intermediate mass medium transmitter station, said at least one receiver control signal being operative at the remote receiver station to	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 59 lines 29-33. Page 25 lines 34-35. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 435 lines 16-18. Page 267 lines 20-28 from example #5.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. At this point, an instruction signal is generated at said program originating studio, ... The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205. In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)	
	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.			

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		In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)	Page 268 line 28 to page 269 line 12 from example #5.
Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.
Column 19 lines 48-53.	These signals instruct microcomputer, 205, to generate several graphic video overlays, ...	Microcomputer, 205, evaluates the initial signal word or words which instruct it to the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.	Page 24 lines 5-16. Page 451 lines 7-11.
	... which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to ...	Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined	Page 19 line 29 to page 20 line 20.

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		information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.	
	... transmit these overlays to TV set, 202,...	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.	Page 26 lines 4-8.
	Column 19 lines 64-66.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.	Page 26 lines 1-8.
control receiver station apparatus and	Column 19 lines 20-29.	Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CCI3 ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.	Page 436 line 9 to page 437 line 6.

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	Then, in a predetermined fashion, microcomputer, 205, may	Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatusto cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
	instruct tuner, 214, to switch box, 201, to channel X	Page 439 lines 9-15.
	and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week,"	Page 295 lines 6-8.
	and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on	Page 445 lines 24-27. Page 446 lines 18-23.
	and tuner, 215, to tune appropriately to	Page 445 line 35 to ...and to tune monitor, 202M, in a

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including at least one of code and data to serve as evidence of		"Wall Street Week."	page 446 line 1. Page 446 lines 17-21.
	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
	Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ... The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...
	Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion

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<p>passing said at least one receiver control signal to at least one controllable device and</p> <p>of the functioning of said controlled one or more receiver station apparatus in response to said at least one receiver control signal;</p>	Column 8 lines 46-50.	<p>The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.</p>	<p>or fashions; and transmits said signal records to a digital recorder, 16, ...</p> <p>Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...</p> <p>The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.</p> <p>... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.</p>	Page 33 lines 18-20.	<p>Controller, 20, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.</p>
	Column 7 lines 47-49.	<p>Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.</p>	<p>Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.</p>	Page 30 lines 29-30.	
	Column 7 lines 50-60.	<p>Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.</p>		Page 31 lines 10-22.	
(3) receiving at least one transmitter	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio		Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates

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control signal at said remote intermediate mass medium transmitter station, said at least one transmitter control signal is effective at said remote intermediate mass medium transmitter station to		originating the programming ...		said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.	
	Column 11 lines 38-46.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.		At this point, an instruction signal is generated at said program originating studio, ... The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.	
		<p>Page 25 lines 34-35.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p>		<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in</p>	

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control the communication of at least one of said mass medium programming and	Column 11 lines 50-57.	... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 lines 14-16.</p> <p>Page 328 line 22 to page 329 line 1.</p>
said at least one receiver control signal; and	Column 4 lines 5-6. Column 19 lines 14-15.	<p>These techniques employ signals embedded in programs.</p> <p>... pass all program and channel identifiers on all programing being cablecast on the multi-channel system.</p>	<p>Page 13 lines 25-26.</p> <p>Page 435 lines 16-18.</p>
		<p>television or radio or other programming transmissions...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>The present invention employs signals embedded in programming.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C ...</p>	

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		Page 248 lines 22-26 from example #5.	Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.
		Page 250 lines 13-16 from example #5.	Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...
		Page 252 lines 15-35 from example #5.	Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter-monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...
		Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5)

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		Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) ... instruction signals embedded in the "Wall Street Week" programming transmission.
(4) causing said remote intermediate mass medium transmitter station to transmit		Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
				Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
				Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
		Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message

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		information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	
		SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...	Page 84 lines 26-28.
		... monitor information that identifies what programming is available, ...	Page 28 lines 26-27.
		Meter-monitor segments contain meter information and/or monitor information.	Page 49 lines 26-27.
in accordance with said at least one transmitter control signal	Column 11 lines 38-43.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or	Page 327 line 35 to page 328 line 13.

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<p>an information transmission comprising one of said mass medium programming and said at least one receiver control signal.</p>	<p>Column 11 lines 50-54.</p>	<p>For example, if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, ...</p>	<p>Page 84 lines 26-28.</p>	<p>network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine ... that said "code" information matches ... schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and</p>
	<p>Column 19 lines 60-63.</p>	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.</p>	<p>Page 59 lines 29-33.</p>	
			<p>Page 25 line 34 to page 26 line 1.</p>	

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			transmitted.	
			<p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p>	
Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."		Then the host says, "And here is what your portfolio did."	
Column 4 lines 5-6.	These techniques employ signals embedded in programs.		The present invention employs signals embedded in programming.	
Column 19 lines 14-15.	... pass all program and channel identifiers on all programing being cablecast on the multi-channel system.		In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C ...	
			Via a conventional multi- channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.	
			Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...	
			Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment	

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				information that is addressed to microcomputer, 205, (and that causes information of the meter- monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...
			Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.

152. The method of claim 151, wherein said mass medium program	Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	Page 25 lines 33-34.	Then the host says, "And here is what your portfolio did."
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material includes audio.				
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153. The method of claim 151, wherein said mass medium program material includes a television program.	Column 19 lines 5-8.	In another example, microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast.	Page 428 lines 21-26.	The program-unit-of-interest information programmed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.
	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.

154. A method of communicating at least one television signal to	Column 10 lines 15-20.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	Page 324 lines 8-17.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.
	Column 10 lines 20-23.	[The signal process apparatus outlined in	Page 324 lines 12-14.	... stations so automated may transmit any

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Claim Language	Reference	Language	Reference
at least one receiver station which includes	Column 17 lines 47-53.	Figs. 1A, 2B, and 2C, and their variants as appropriate] can be used in a facility transmitting television programming, radio programming, and making other electronic transmissions. FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ... Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons. Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
one of a broadcast television receiver and a cablecast television receiver,	Column 6 lines 30-41.	The cable transmission is input simultaneously to switch 1 and mixer 2. The broadcast transmission is input to switch 1. Switch 1 and mixers 2 and 3 are all controlled by local oscillator and switch control 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer 3 which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.	The cable transmission is inputted simultaneously to switch, 1, and mixer, 2. The broadcast transmission is inputted to switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.
a television monitor,	Column 19 lines 27-28.	... and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, oninstructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...

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a signal detector,	Column 18 lines 14-17.	TV signal decoder, 203, detects signals in the programming transmission on the channel which signals it transfers to monitor or processor, 204.	Page 408 lines 18-29.
a processor operatively connected to said signal detector, said processor adapted to respond to at least one control signal, said method comprising the steps of:	Column 18 lines 17-19.	Monitor or processor, 204, determines that certain signals are addressed to switch, 212, and transfers these signals to switch, 212.	Page 408 lines 31-34. Page 95 lines 18-24.
receiving television programming at a transmitter station and	Column 10 lines 30-39.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by

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delivering said television programming to a first transmitter;	Column 12 lines 57-58.	programming input means, 62, can receive programming transmissions.	other programming input means, 62.
	Column 10 lines 40-47.	<p>This particular embodiment describes a transmission facility transmitting only television programming.</p> <p>All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p>	<p>So far this disclosure has described an intermediate transmission station that transmits conventional television programming....</p> <p>Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p>
receiving said at least one control signal at transmitter station apparatus,	Column 10 lines 30-39.	<p>The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.</p> <p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...</p>	<p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.</p>
	Column 11 lines 3-5.		<p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68,</p>

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Language				Language	
said at least one control signal being operative at said at least one receiver station to control a plurality of controllable receiver station devices and	Column 18 lines 14-19.	TV signal decoder, 203, detects signals in the programming transmission on the channel which signals it transfers to monitor or processor, 204. Monitor or processor, 204, determines that certain signals are addressed to switch, 212, and transfers these signals to switch, 212.	Page 59 lines 29-33	69, or 70, selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station; ... A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.	
	Column 18 lines 19-22.	These signals instruct switch, 212, to turn power on to radio, 209, and its associated equipment, including a conventional digital tuner, 213.	Page 408 lines 31-34.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of ... an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, ... Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.	
	Column 18 lines 22-25.	Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly. These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.	Page 410 lines 10-11.	Receiving said SPAM message causes said controller, 44, switch power on to ... radio, 209, ...	
			Page 408 lines 31-34.	Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.	

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transferring said at least one control signal to one of said first transmitter and	Column 10 lines 40-47.	All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 410 lines 10-11. Page 324 line 31 to page 325 line 4. Page 408 lines 18-29.	Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ... Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92. Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of a "01" header, an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, appropriate padding bits, an information segment that contains particular 104.1-MHz information, and an end of file signal. Said message is detected at said decoder, 203, and inputted to said controller, 39, ... A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
a second transmitter; and	Column 18 lines 14-17. Column 19 lines 60-63.	TV signal decoder, 203, detects signals in the programming transmission on the channel which signals it transfers to monitor or processor, 204. At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33. Page 25 line 34 to page	At this point, an instruction signal is generated

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				26 line 1. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 408 lines 18-29.	at said program originating studio, embedded in the programming transmission, and transmitted. The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ... Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of a "01" header, an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, appropriate padding bits, an information segment that contains particular 104.1-MHz information, and an end of file signal. Said message is detected at said decoder, 203, and inputted to said controller, 39,
	Column 18 lines 14-17.	TV signal decoder, 203, detects signals in the programming transmission on the channel which signals it transfers to monitor or processor, 204.			
transmitting, to said at least one receiver station, said television programming,	Column 12 lines 45-46.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming ...		Page 337 lines 3-10.	In field distribution system, 93, amplifier, 94, inputs ... all programming transmitted by the cable television system head end station...
	Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.		Page 339 lines 9-11.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming....
said at least one control signal, and	Column 18 lines 14-17.	TV signal decoder, 203, detects signals in the programming transmission on the		Page 408 lines 18-29.	Periodically thereafter, said program originating studio embeds in said transmission

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at least one of code and data to serve as evidence of	Column 18 lines 30-37.	channel which signals it transfers to monitor or processor, 204.	and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of a "01" header, an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, appropriate padding bits, an information segment that contains particular 104.1-MHz information, and an end of file signal. Said message is detected at said decoder, 203, and inputted to said controller, 39,
		TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.
			Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.
			The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming

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			transmissions ...
	The processors, 204 and 210, transfer this information to signal processor, 200,	Page 36 lines 32-33.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.
		Page 38 lines 11-14.	Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.
		Page 411 lines 10-15	... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.
		Page 418 line 23 to page 419 line 15.	Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.
	for recording and subsequent transmission to a remote data collection site.	Page 411 line 28 to page 412 line 2.	In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in

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<p>passing portions of said at least one control signal to said plurality of controllable receiver station devices and</p>	<p>Column 18 lines 14-19.</p>	<p>TV signal decoder, 203, detects signals in the programming transmission on the channel which signals it transfers to monitor or processor, 204. Monitor or processor, 204, determines that certain</p>	<p>Page 173 line 30 to page 174 line 23 from example #3.</p>	<p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st" monitor information (#3).")</p>	<p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of ... an execution segment of</p>
				<p>Page 419 lines 4-15.</p>	
				<p>Page 28 lines 25-35.</p>	
				<p>Page 408 lines 18-29.</p>	

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			signals are addressed to switch, 212, and transfers these signals to switch, 212.		particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, ...
	Column 18 lines 22-24.	Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly.		Page 408 lines 31-34.	Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.
				Page 408 lines 31-34.	Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.
				Page 95 lines 18-24.	Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... and to transfer said message to ... So transferring said message is the controlled function that the information said header and execution segment cause controller, 39, to perform.
of functioning of said plurality of controllable receiver station devices based on said at least one control signal.	Column 18 lines 17-19.	Monitor or processor, 204, determines that certain signals are addressed to switch, 212, and transfers these signals to switch, 212.		Page 408 lines 31-34.	Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.
				Page 95 lines 18-24.	Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... , and to transfer said message to ... So transferring said message is the controlled function that the information said header and execution segment cause controller, 39, to

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	<p>Column 18 lines 19-22.</p> <p>These signals instruct switch, 212, to turn power on to radio, 209, and its associated equipment, including a conventional digital tuner, 213.</p> <p>Column 18 lines 22-24.</p> <p>Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly.</p> <p>Column 18 lines 24-25.</p> <p>These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.</p>	<p>perform.</p> <p>Receiving said SPAM message causes said controller, 44, switch power on to ... radio, 209, ...</p> <p>Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.</p> <p>Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... and to transfer said message to ... So transferring said message is the controlled function that the information said header and execution segment cause controller, 39, to perform.</p> <p>Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ...</p>
<p>155. A media receiving apparatus for gathering at least one identifying signal</p>	<p>Column 6 lines 23-26.</p> <p>A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.</p> <p>Column 15 lines 27-30.</p> <p>FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programing usage and associated uses of other data transmissions and equipment.</p>	<p>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.</p> <p>Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives</p>

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from a plurality of identifying signals comprising:		Column 20 lines 49-54.	Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received.	Page 28 lines 25-29.	programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing ... [Signal processor 200 in Fig. 7 and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
		Column 8 lines 2-4.	Buffer/comparator, 14, is connected to clock, 18, and has means for adding information such as time of receipt, for example, to signals.	Page 314 line 30-33.	At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.
	input apparatus for receiving	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion ...	Page 32 lines 14-16.	Buffer/comparator, 14, receives time information from clock, 18, and has means for incorporating time information into signal records.
				Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.
				Page 36 line 32 to page	Each decoder is controlled by a controller, 39,

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media signals;	Column 6 lines 23-30.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	37 line 3. Page 29 lines 4-15.	44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	
an output port;	Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 31 lines 14-18.	If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.	
a storage device;	Column 20 lines 54-56.	... when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site, ...	Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.	
a processor operatively connected to said input	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that	Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured	

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port, said output apparatus, and said storage device, said processor programmed for:			conveys both television and radio programming and a broadcast television input is shown in Figure 1. See Fig. 1.		for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. See Fig. 2.
receiving a media signal from said input apparatus;	Column 7 lines 39-49.	In a pre-determined fashion, buffer/comparator, 8, identifies signal words and/or signal units that must be decrypted, either in whole or in part, and passes identified signal words and/or units to decrypter, 10. Decrypter, 10, uses conventional decrypter techniques, well known in the art, in a pre-determined fashion to decrypt such signals as required. Decrypter, 10, then passes the decrypted signals to processor or monitor, 12. Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 21-26. Page 30 line 31 to page 31 line 1. Page 30 lines 29-30.	In a fashion described more fully below, buffer/comparator, 8, and a controller, 20, which, too, is described more fully below, determine whether signal processor, 26, is enabled to decrypt said information. If signal processor, 26, is so enabled, buffer/comparator, 8, transfers said information to decrypter, 10. Decrypter, 10, is a standard digital information decrypter, well known in the art, that ... uses conventional decrypter techniques, well known in the art, to decrypt said signals as required. Decrypter, 10, transfers decrypted signals to controller, 12. Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.	
detecting a control signal from said media signal;	Column 7 lines 50-60.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 31 lines 10-22.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decrypter, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.	

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passing said control signal from said media signal, to said output port, said output port	Column 7 lines 54-58.	Column 20 lines 33-36.	<p>If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.</p> <p>... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...</p>	Page 31 lines 14-18.	<p>If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....</p>
transferring said control signal to an external device;				Page 476 line 34 to page 477 line 8.	
				Page 477 lines 8-17.	
generating said plurality of identifying signals that identify characteristics of said control signal from the step of passing said	Column 7 lines 59-60.		<p>If [a signal or signals] are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.</p>	Page 31 lines 18-22.	<p>If [a signal or signals] contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.</p>

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control signal;		Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.	<p>Page 472 lines 23-27.</p> <p>Page 473 line 29 to page 474 line 1.</p>	<p>... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p>
selecting said at least one identifying signal from said plurality of identifying signals from said step of generating said plurality of identifying signals; and		Column 7 line 67 to column 8 line 1.	To avoid overloading digital recorder, 16, with duplicate data, buffer/comparator, 14, has means for counting and discarding duplicate signals.	Page 32 lines 9-12.	To avoid overloading digital recorder, 16, with duplicate data, buffer/comparator, 14, has means for counting and/or discarding duplicate instances of particular signal information....
storing said at least one identifying signal from said step of selecting at least one said identifying signal in said storage device.		Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed,buffer/comparator, 14, transmits the combined information to a digital recorder, 16.	Page 31 line 30 to page 32 line 1.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...
156. The apparatus of claim 155, further		Column 8 lines 20-25.	The signal processor apparatus also has a controller device which includes	Page 33 lines 7-12.	Signal processor, 26, has a controller device which includes programmable RAM

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comprising: a telephone interface operatively connected to said processor;			programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22.		controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22.
said processor further programmed for:	Column 8 lines 20-25.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22.	Page 33 lines 7-12.		Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22.
communicating said at least one identifying signal from said storage device to an external data collection station with said telephone interface.	Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.	Page 33 lines 18-20. Page 273 lines 4-6. Page 273 lines 21-25.		Controller, 20, has capacity for controlling the operation of all elements of the signal processor ... The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. ... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.
157. The apparatus of claim 155, wherein said output port is connected to said external device.		See Figs. 1 and 6F & G.			See Figs. 2 & 7.

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158. The apparatus of claim 157, wherein said external device is selected from a group consisting of: a heater, an air conditioner, a radio receiver, a player, a computer, a storage device, a tuner, and a printer.		See Figs. 1 and 6F & G.		See Figs. 2 & 7.
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159. A method of delivering and	Column 20 lines 27- 31.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 ...	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
gathering information on use of	Column 15 lines 27-30.	FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programming usage and associated uses of other data transmissions and equipment.	Page 312 line 33 to page 313 line 8.	Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives

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a multiple use control signal in			programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing ...		
		Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.	Page 28 lines 25-29. Page 472 lines 23-27.	[Signal processor 200 in Fig. 7 and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. ... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
		Column 20 lines 31-37.	This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form and instruct control means, 226, to activate printer, 221.	Page 473 line 29 to page 474 line 1. Page 471 line 26 to page 472 line 17.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above. Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function

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			<p>instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p> <p>... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the</p>
		<p>476 line 34 to page 477 line 8.</p> <p>Page 477 lines 8-17.</p> <p>Page 474 lines 3-7.</p>	

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a communications network, said network having a transmitter station and a receiver station, said transmitter station communicating commands to	Column 9 lines 21-23.	[The Controller, 20] is interactive with external sources via telephone connection, 22, and ...	<p>family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...</p> <p>Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a particular instruct-to- receive signal. Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.</p> <p>At 3:10 AM, GMT, said <i>European master network station</i> transmits particular SPAM message information, embedded in the information of said master transmission, including a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain operating system instructions. In so doing, said European master network station inputs operating system instructions to all SPAM apparatus and receiver station computers, 73, and microcomputers, 205, thereby causing said apparatus and computers, 73 and 205, as described above in "PREPROGRAMMING RECEIVER STATION OPERATING SYSTEMS," to commence operating under control of the instructions of said operating systems.</p> <p>... particular information of said TELEPHON.EXE module that causes ...</p>	Page 273 lines 6-19.	<p>... particular information of said TELEPHON.EXE module that causes ...</p>
	... can be reprogramed from such remote sources. See Fig. 1.			Page 537 lines 6-17.	
				with respect to page 555 line 24 to page 556	

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<p>a computer program stored at said receiver station and</p>	<p>Column 10 line 64 to Column 11 line 1.</p>	<p>At distribution amplifiers, 63 through 70, each incoming feed is split into two paths. One is the conventional path whereby programming has flowed and continues to flow to recording devices, 76 and 78, and/or to flow to field distribution system, 93.</p>	<p>line 14.</p>	<p>signal processor, 200, to transmit the information ... via telephone network in the fashion of example #10, to a computer at a particular remote data collection station.</p> <p>Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each farmer expects to harvest during the 2027 growing season. Automatically, the received data is aggregated, in a fashion well known in the art, at the computer of said <i>European master network</i> origination and control station ...</p> <p>Then, at 3:59 PM, on Thursday, February 18, 2027, the cycle of generating and communicating information of farmers is repeated ...</p> <p>See Fig. 2.</p> <p>In line between each of the aforementioned receiver/demodulator/ input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, and matrix switch, 75, is a dedicated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, that splits each incoming feed into two paths. One path is the conventional path whereby programming flows from each given receiver/demodulator/ input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, to matrix switch, 75.</p> <p>Each receiver/modulator/ input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire to a conventional matrix switch, 75, well known in the art, that outputs to one or more recorder/players, 76 and 78, and/or to apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, ...</p>

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receiving information from said receiver station,	Column 9 lines 8-13.	Digital recorder, 16, can tell the controller, 20, when it reaches predetermined levels of fullness to permit the controller, 20, to instruct auto dialer, 24, to contact an appropriate remote site allowing the recorder, 16, to output its data making memory available.	Page 33 lines 4-6. Page 272 line 26 to page 273 line 8.	Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness. In each example, ... recorder, 16, measures the quantity of its recording capacity that holds signal records, in a predetermined fashion, and determines that said quantity is equal to or greater than said particular fullness information. Said determining causes recorder, 16, to transfer a particular instruct-to-call instruction to controller, 20, that causes controller, 20, to activate telephone connection, 22, and proceed with a particular preprogrammed telephone signal record transfer sequence that is fully automatic. The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Automatically said second computer responds with a particular transmission complete signal that causes controller, 20, to terminate said telephone call then to cause recorder, 16, to erase from memory all said meter charge information.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. See Fig. 2.
said receiver station having an input device, a processor for executing said computer program and for receiving said commands from said transmitter station and for transmitting information to a remote	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1. See Fig. 1.	Page 275 line 33 to page 276 line 2. Page 29 lines 4-7.		

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station, and a computer for using multiple use control signals and said commands directed to said computer program, said method comprising the steps of:					
inputting a command at said input device;	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...		Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
receiving at said receiver station an indication of a multiple use control signal from said remote station;	Column 20 lines 27-32.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, ...		Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
processing at said receiver station said indication of said	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,		Page 472 lines 15-17.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-#

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multiple use control signal in accordance with said computer program;	Column 8 lines 56-58. Column 8 lines 20-27.	... To facilitate the operation of the device, the controller, 20, can receive information from all operating elements of the apparatus. The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.	Page 33 lines 18-21. Page 33 lines 7-20.	memory ... Controller, 20, has capacity for ... all elements of the signal processor and can receive operating information from said elements. Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...
communicating a computer output to a computer peripheral and controlling	Column 20 lines 31-37.	This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form and instruct control means, 226, to activate printer, 221.	Page 471 line 26 to page 472 line 17. 476 line 34 to	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ... (An alternate method for inputting said

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a presentation of				page 477 line 8.	second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.
				Page 477 lines 8-17.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...
				Page 474 lines 3-7.	... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...
		Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 473 lines 3-13.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe ... instructions ...
				Page 477 lines 12-17.	... selected converter box, 222, to tune said box, 222, to receive said second transmission;

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				Page 477 lines 23-29.	to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....
				Page 478 lines 1-5.	... causes ... said decoder, 290, to detect and process properly the information of said second message.
					(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
				Page 475 lines 1-2.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.
media programming in accordance with said multiple use control signal;	Column 20 line 11.	Coordinating Print and Video		See generally page 469 line 1 to page 516 line 13. (Page 469 lines 1-2 quoted herein.)	Automating U. R. Stations ... Examples #9 and # 10 Continued Coordinating Computers, Television, and Print
communicating from said receiver station to said transmitter station data that represents a record of the use of said media programming or said multiple use control signal.	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,		Page 28 lines 25-35.	[Signal processor in Fig.7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
		that site can determine for billing		Page 44 lines 26-30.	... meter-monitor segments. Said segments

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		purposes that the recipe was,		contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...
			Page 471 lines 26-31.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,....
	first, ordered		Page 473 lines 3-8.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...
			Page 472 lines 23-27 with	Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
			Page 471 lines 14-16.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...
	and, second, delivered.		Page 473 line 29 to Page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.

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		The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.	Page 257 line 24 to page 258 line 19.	<p>the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p>
	This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG.		Page 265 line 27 to Page 266 line 21.	<p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast,</p>
			Page 250 lines 13-17.	

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	2B.			of the first message of the "Wall Street Week" program which is the message of the first combining synchronizing command.
			Page 251 lines 8-11.	Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...
			Page 263 lines 19-24.	... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.
organize,	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion ...	Page 37 lines 26-28.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.
			Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.
			Page 36 line 32 to page 37 line 3.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs
communicate, select or identify	Column 7 lines 50-60.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-	Page 31 lines 10-22.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12,

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a multiple use control signal.	determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Column 20 lines 27-37.	<p>Five minutes later,</p> <p>a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.</p> <p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,</p> <p>instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form</p>	<p>identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered- information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200.</p> <p>Receiving said message causes controller, 20, to load and execute said check-for- entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause an instance of ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the</p>	<p>Page 471 line 26 to page 472 line 17.</p> <p>Page 476 line 34 to Page 477 line 8.</p>

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			Page 477 lines 8-17.	microcomputer, 205, of said station. In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission.... ... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...
	and instruct control means, 226, to activate printer, 221.		Page 474 lines 3-7.	
Column 20 lines 37-42.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200,		Page 477 lines 8-23.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...
			Page 281 lines 1-6.	By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")

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		which, in a predetermined fashion, signal processor, 200, decrypts and transfers	Page 282 line 2 to page 283 line 33.	<p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p>
		to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.	Page 478 lines 1-5.	

161. A method for gathering information on the	Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.	<p>Page 472 lines 23-27.</p> <p>Page 473 line 29 to page 474 line 1.</p>	<p>... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor,</p>
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	Column 15 lines 27-30.	FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programming usage and associated uses of other data transmissions and equipment.	Page 312 line 33 to page 313 line 8.	200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
				Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing ...
			Page 28 lines 25-29.	[Signal processor 200 in Fig. 7 and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage.
selection of one of	Column 15 lines 1-4.	If signal processor, 112, can identify, processes, and transfer the needed signal or signals, decryptor/interruptor, 115, can decrypt and/or transfer the incoming transmission from box, 114, satisfactorily.	Page 291 lines 21-32.	In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, select the information of the execution segment in said message, and determine that said selected information matches the aforementioned instance of enable-next-program-on-CC13 information at said particular controlled-function-invoking information location. So determining a match causes the control processor, 39J, to execute particular preprogrammed transfer-this-message-to- controller-20 instructions that are

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a decryption key and	Column 4 lines 40-46.		<p>associated with the instance of information at said particular location.</p> <p>Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions.</p> <p>Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission, ...</p>
	Both the arrangement of signal units in signal words and the locations, timings, and lengths of signal words in individual transmissions or groups of transmissions may vary in fashions that can only be interpreted accurately by apparatus that are preprogrammed with the keys to such variations.	Page 13 lines 19-24.	<p>They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.</p>
		Page 14 lines 10-25.	<p>... [signals] will probably lie outside the range of the television picture displayed on a normally tuned television set. In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear. In television audio, they are likely to lie between eight and fifteen kilohertz. In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming in the conventional transmission stream but will include instructions that receiver station apparatus are preprogrammed to process that instruct receiver apparatus to separate the signals from the conventional programming and process them differently. In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive</p>

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a decryption code from				one complete instruction.	
				SPAM messages are composed of elements—headers, execution segments, meter-monitor segments, and information segments--whose bit lengths vary. SPAM apparatus determine the bit length of said elements in different fashions, and the particular fashion that applies to any given element relates to the priority of said element for subscriber station speed of processing. First priority segment information has the highest priority for speedy processing and is of fixed binary bit length. A SPAM header is one example of a first priority segment. An execution segment is another example. Intermediate priority segment information has lower priority, varies in bit length, but contains internal length information. A Meter-monitor segment is one example of an intermediate priority segment. Lowest priority segment information has the lowest priority, varies in length, and contains no internal information for determining segment length. Each information segment is an example of a lowest priority segment.	Page 60 line 19 to page 61 line 1.
				All subscriber station apparatus are fully preprogrammed to perform automatically each step of each example. No manual step is required at any station.	Page 91 lines 18-20.
				In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...	Page 477 lines 8-23.
	Column 20 lines 37-42.		The signal transmission from processor, 204, also passes a signal word to signal processor, 200,		Page 281 lines 1-6.
				By themselves, the first and second features	

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a plurality of decryption signals stored	Column 14 lines 46-54.	<p>which, in a predetermined fashion, signal processor, 200, decrypts and transfers</p> <p>to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.</p> <p>The signal or signals necessary for the decryption of the channel that box, 114, passes to decryptor/interruptor, 115,</p>	<p>Page 282 line 2 to page 283 line 33.</p> <p>Page 478 lines 1-5.</p> <p>Page 299 lines 13-25.</p>	<p>provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")</p> <p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p> <p>Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
				outputting decrypted information to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video portion (said information being, as explained above, encrypted digital video), to decrypt said information, ...
	in this case, is not located in the channel transmission.		Page 298 line 34 to page 299 line 1.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba ...
	They may be preprogramed into the signal processor (for example,		Page 299 lines 13-17.	Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, ...
	in programmable random access memory controller, 20, in Fig. 1)		Page 298 line 33 to page 299 line 1.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba ...
	or they may be transmitted in a channel other than the channel being transferred from box, 114.		Page 293 line 20.	... such as, for example, the RAM of controller, 20; ...
			Page 291 lines 10-20.	... said head end is caused, in a predetermined fashion, to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions and ... enable-WSW instructions that include particular enable-WSW-programming information, ... on the frequency of said master control channel. (Hereinafter said message is called the "local-cable-enabling-message (#7).") ...
			Page 289 lines 25-27.	... said "Wall Street Week" program when

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at a receiver station, said receiver station having	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 290 lines 28-29. Page 294 lines 28-35.	transmission of said program on cable cable 13 commences. particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system ... Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions. Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission, ...
	Column 20 lines 27-29. Column 20 lines 37-42.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ... The signal transmission from processor, 204, also passes a signal word to signal processor, 200,	Page 390 lines 30-35. Page 396 lines 8-10. Page 471 line 35 to page 472 line 1. Page 477 lines 8-23.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons. Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples. At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ... In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the
an input for receiving a selection signal from an external source,				
a processor for selecting said one of a decryption key and a decryption code, and				

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a storage device for storing said plurality of			Page 281 lines 1-6.	<p>controller, 39, of said decoder, 290. In due course, said programming originating ...</p> <p>By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")</p> <p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p> <p>See Fig. 2.</p>
	which, in a predetermined fashion, signal processor, 200, decrypts and transfers		Page 282 line 2 to page 283 line 33.	<p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p> <p>See Fig. 2.</p>
	to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.		Page 478 lines 1-5.	<p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p> <p>See Fig. 2.</p>

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decryption signals, said method comprising the steps of:				
storing a plurality of first decryption signals in said storage device;	Column 14 lines 46-54.	The signal or signals necessary for the decryption of the channel that box, 114, passes to decryptor/interruptor, 115,	Page 299 lines 13-25.	Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video portion (said information being, as explained above, encrypted digital video), to decrypt said information, ...
		in this case, is not located in the channel transmission.	Page 298 line 34 to page 299 line 1.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba ...
		They may be preprogrammed into the signal processor (for example,	Page 299 lines 13-17.	Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, ...
		in programable random access memory controller, 20, in Fig. 1)	Page 298 line 33 to page 299 line 1.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba ...
		or they may be transmitted in a channel other than the channel being transferred	Page 293 line 20.	... such as, for example, the RAM of controller, 20; ...
			Page 291 lines 10-20.	... said head end is caused, in a predetermined fashion, to transmit a particular enabling

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		from box, 114.		<p>SPAM message that consists of ... enable-CC13 instructions and ... enable-WSW instructions that include particular enable-WSW-programming information, ... on the frequency of said master control channel. (Hereinafter said message is called the "local-cable-enabling-message (#7).") ...</p> <p>... said "Wall Street Week" program when transmission of said program on cable cable 13 commences. ...</p> <p>... particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system ...</p> <p>Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions.</p> <p>Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission, ...</p>
indexing said plurality of first decryption signals to provide an index containing a second plurality of decryption signals;	Column 4 lines 36-40.	In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.	Page 13 lines 19-24.	<p>They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.</p>
receiving a signal from an external source,	Column 20 lines 37-39.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200, ...	Page 477 lines 8-23.	<p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-</p>

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said signal indicating			Page 281 lines 1-6.	invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating
	Column 20 lines 37-42.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200,	Page 477 lines 8-23.	By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")
			Page 281 lines 1-6.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...
		which, in a predetermined fashion, signal processor, 200, decrypts and transfers	Page 282 line 2 to page 283 line 33.	By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.") ... the information of said segments is encrypted prior to transmission ... The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the

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a selection of said one of		to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.		apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ... Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".
	Column 14 lines 54-55.	If signal processor, 112, has been preprogrammed with the signal or signals ...	Page 478 lines 1-5.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
a decryption key and	Column 4 lines 40-46.	Both the arrangement of signal units in signal words and the locations, timings, and lengths of signal words in individual transmissions or groups of transmissions may vary in fashions that can only be interpreted accurately by apparatus that are preprogrammed with the keys to such variations.	Page 298 line 33 to page 299 line 1.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba.
			Page 13 lines 19-24.	They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preformed regarding the patterns that obtain at any given time will be able to process the signals correctly.
			Page 14 lines 10-25.	... [signals] will probably lie outside the range of the television picture displayed on a normally tuned television set. In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear. In television audio, they are likely to lie between eight and fifteen kilohertz. In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming in the conventional transmission

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a decryption code from one of said plurality of	Column 20 lines 41-42.	... to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt	<p>Page 60 line 19 to page 61 line 1.</p> <p>Page 91 lines 18-20.</p> <p>Page 478 lines 1-5.</p>	<p>stream but will include instructions that receiver station apparatus are preprogrammed to process that instruct receiver apparatus to separate the signals from the conventional programming and process them differently. In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.</p> <p>SPAM messages are composed of elements---headers, execution segments, meter-monitor segments, and information segments--whose bit lengths vary. SPAM apparatus determine the bit length of said elements in different fashions, and the particular fashion that applies to any given element relates to the priority of said element for subscriber station speed of processing. First priority segment information has the highest priority for speedy processing and is of fixed binary bit length. A SPAM header is one example of a first priority segment. An execution segment is another example. Intermediate priority segment information has lower priority, varies in bit length, but contains internal length information. A Meter-monitor segment is one example of an intermediate priority segment. Lowest priority segment information has the lowest priority, varies in length, and contains no internal information for determining segment length. Each information segment is an example of a lowest priority segment.</p> <p>All subscriber station apparatus are fully preprogrammed to perform automatically each step of each example. No manual step is required at any station.</p> <p>(Whichever transmission method is employed the information of said second message can be</p>

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<p>first decryption signals and said second plurality of decryption signals</p> <p>by locating said one of a decryption key and a decryption code with said index;</p>	Column 14 lines 54-55.	the incoming encrypted recipe.	Page 298 line 33 to page 299 line 1.	encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)	
	Column 4 lines 36-40.	If signal processor, 112, has been preprogrammed with the signal or signals ...	Page 13 lines 19-24.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba.	
	Column 14 lines 59-61.	In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.	Page 295 line 30 to page 296 line 1.	They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.	
		... signal processor, 112, can transfer the signal to decryptor/interruptor, 115.	Page 299 lines 13-18.	Automatically, controller, 20, selects information of cipher key Ca from among the information of said portion; transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio information, using said key information and selected decryption cipher algorithm C, and outputting decrypted information of the audio portion ...	
selecting said one of a decryption key and	Column 8 lines 20-27.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable	Page 33 lines 7-20.	Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258. ...	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the

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	Column 4 lines 40-46.	of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus. Both the arrangement of signal units in signal words and the locations, timings, and lengths of signal words in individual transmissions or groups of transmissions may vary in fashions that can only be interpreted accurately by apparatus that are preprogrammed with the keys to such variations.		<p>Page 13 lines 19-24.</p> <p>subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...</p> <p>They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preformed regarding the patterns that obtain at any given time will be able to process the signals correctly.</p> <p>Page 14 lines 10-25.</p> <p>... [signals] will probably lie outside the range of the television picture displayed on a normally tuned television set. In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear. In television audio, they are likely to lie between eight and fifteen kilohertz. In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming in the conventional transmission stream but will include instructions that receiver station apparatus are preprogrammed to process that instruct receiver apparatus to separate the signals from the conventional programming and process them differently. In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.</p> <p>Page 60 line 19 to page 61 line 1.</p> <p>SPAM messages are composed of elements—headers, execution segments, meter-monitor segments, and information segments--whose bit lengths vary. SPAM apparatus determine the bit length of said elements in different fashions, and the particular fashion that</p>	

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			<p>applies to any given element relates to the priority of said element for subscriber station speed of processing. First priority segment information has the highest priority for speedy processing and is of fixed binary bit length. A SPAM header is one example of a first priority segment. An execution segment is another example. Intermediate priority segment information has lower priority, varies in bit length, but contains internal length information. A Meter-monitor segment is one example of an intermediate priority segment. Lowest priority segment information has the lowest priority, varies in length, and contains no internal information for determining segment length. Each information segment is an example of a lowest priority segment.</p>
			<p>All subscriber station apparatus are fully preprogrammed to perform automatically each step of each example. No manual step is required at any station.</p>
			<p>... the information of said segments is encrypted prior to transmission...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111"</p>
			<p>Page 91 lines 18-20.</p>
			<p>Page 282 line 2 to page 283 line 33.</p>
			<p>[a signal word] ... which in a predetermined fashion, signal processor, 200, decrypts and transfers ...</p>
			<p>Column 20 lines 39-41.</p>

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a decryption code	Column 20 lines 41-42.	... to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.	Page 478 lines 1-5.
based on said index;	Column 4 lines 36-40.	In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.	Page 13 lines 19-24.
loading said one of a decryption key and	Column 8 lines 39-40.	[Controller, 20] can tell decrypter, 10, when and how to change decryption patterns, fashions, and techniques.	Page 33 lines 18-20. For example, page 147 lines 23-28. For example, page 149 line 27 to page 150 line 6.
		(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.) They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.	
		Controller, 20, has capacity for controlling the operation of all elements of the signal processor ... Among said preprogrammed instructions is key information of J, and said instructions cause controller, 20, automatically to select and transfer said key information to decryptor, 10. Decryptor, 10, receives said key information and automatically commences using it as its key for decryption. Decryptor, 10, commences ... decrypting ... Said decrypt-a-00-header-message instructions cause controller, 20, to cause decryptor, 10, to transfer the first H bits without decrypting or altering said bits in any fashion, to decrypt and transfer the next X bits, to transfer the next L bits without decrypting or altering said bits, to decrypt and transfer the next MMS-L bits, and finally, to transfer any bits remaining after the last of said MMS-L bits without decrypting or altering said bits. In this fashion, the cadence information in said message, which is not	

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a decryption code to a decryption device; and	Column 20 lines 41-42.	... to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.	Page 478 lines 1-5.	encrypted, is transferred by decryptor, 10, to controller, 12, without alteration. (Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)	
storing information in said storage device that reflects the selection of said one of a decryption key and a decryption code.	Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.	Page 472 lines 23-27. Page 473 line 29 to page 474 line 1.	... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information. Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.	
162. The method of claim 161, wherein said plurality of first decryption signals includes a plurality of codes.	Column 13 lines 31-32.	The signal or signals may transmit a code or codes necessary for the decryption of the transmission.	Page 292 lines 7-11. Page 54 lines 2-6.	Receiving said message causes controller, 20, to load the enable-CC13 instructions and the enable-WSW instructions of the information segment of said message at particular RAM of controller, 20, and execute said instructions as the machine language instructions of one job. An information segment can transmit any information that a processor can process. It can transmit compiled machine language code or assembly language code or higher level	

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			<p>language programs, all of which are well known in the art.</p> <p>Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions.</p> <p>Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission,....</p> <p>... thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio). Automatically, controller, 20, selects information of cipher key Ca from among the information of said portion; transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio information, using said key information and selected decryption cipher algorithm C, and outputting decrypted information of the audio portion of the "Wall Street Week" program....</p>
			<p>Page 294 lines 28-35.</p> <p>Page 295 line 27 to page 296 line 2.</p>

163. The method of claim 162, wherein said second plurality of decryption signals includes one or more of said plurality of codes.	Column 14 lines 50-51.	They may be preprogramed into the signal processor (for example, ...	<p>Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, ...</p> <p>At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba.</p> <p>In the interval between said commence-</p>
	Column 13 lines 17-20.	The signals that enable the	<p>Page 299 lines 13-17.</p> <p>Page 298 line 33 to page 299 line 1.</p> <p>Page 291 lines 9-24</p>

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	decrypter/interrupter, 101, to decrypt and/or transfer programing uninterrupted may be embedded in the programing or may be elsewhere.		<p>enabling time and said 8:30 PM time, said head end is caused, ... to transmit a particular enabling SPAM messages that consists of ... enable-CC13 instructions and particular enable-WSW instructions that include particular enable-WSW-programming information, ... <i>on the frequency of said master control channel</i>. (Hereinafter said message is called the "local-cable-enabling-message (#7).")</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...</p> <p>In example #7, the controller, 20, of the signal processor, 200, of Fig. 4 is preprogrammed at a particular time with particular information that indicates that the subscriber of said station wishes to view said "Wall Street Week" program when transmission of said program on cable cable 13 commences.</p> <p>particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system</p> <p>Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission.</p> <p>Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, ...</p>	
		Page 289 lines 22-27		
		Page 290 lines 28-29		
		Page 298 lines 17-21.		
		Page 299 lines 19-22.		

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	Column 13 lines 31-32.	The signal or signals may transmit a code or codes necessary for the decryption of the transmission.	Page 292 lines 7-11. Page 54 lines 2-6. Page 294 lines 28-35. Page 295 line 27 to page 296 line 2.	<p>Receiving said message causes controller, 20, to load the enable-CC13 instructions and the enable-WSW instructions of the information segment of said message at particular RAM of controller, 20, and execute said instructions as the machine language instructions of one job.</p> <p>An information segment can transmit any information that a processor can process. It can transmit compiled machine language code or assembly language code or higher level language programs, all of which are well known in the art.</p> <p>Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions.</p> <p>Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission,....</p> <p>... thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio). Automatically, controller, 20, selects information of cipher key Ca from among the information of said portion; transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio information, using said key information and selected decryption cipher algorithm C, and outputting decrypted information of the audio portion of the "Wall Street Week" program....</p>

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164. The method of claim 161, wherein said plurality of first decryption signals includes a plurality of keys.	Column 4 lines 40-46.	Both the arrangement of signal units in signal words and the locations, timings, and lengths of signal words in individual transmissions or groups of transmissions may vary in fashions that can only be interpreted accurately by apparatus that are preprogrammed with the keys to such variations.	<p>Page 13 lines 19-24.</p> <p>Page 14 lines 10-25.</p> <p>Page 60 line 19 to page 61 line 1.</p>	<p>They also include techniques whereby the pattern of the composed signals may vary in location of embedded signals may vary in such fashions that only receiving apparatus that are preformed regarding the patterns that obtain at any given time will be able to process the signals correctly.</p> <p>... [signals] will probably lie outside the range of the television picture displayed on a normally tuned television set. In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear. In television audio, they are likely to lie between eight and fifteen kilohertz. In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming in the conventional transmission stream but will include instructions that receiver station apparatus are preprogrammed to process that instruct receiver apparatus to separate the signals from the conventional programming and process them differently. In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.</p> <p>SPAM messages are composed of elements—headers, execution segments, meter-monitor segments, and information segments--whose bit lengths vary. SPAM apparatus determine the bit length of said elements in different fashions, and the particular fashion that applies to any given element relates to the priority of said element for subscriber station speed of processing. First priority segment information has the highest priority for speedy processing and is of fixed binary bit length. A SPAM header is</p>

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				<p>one example of a first priority segment. An execution segment is another example. Intermediate priority segment information has lower priority, varies in bit length, but contains internal length information. A Meter-monitor segment is one example of an intermediate priority segment. Lowest priority segment information has the lowest priority, varies in length, and contains no internal information for determining segment length. Each information segment is an example of a lowest priority segment.</p> <p>All subscriber station apparatus are fully preprogrammed to perform automatically each step of each example. No manual step is required at any station.</p>
165. The method of claim 164, wherein each of said plurality of keys programs said receiver station with a pattern.	Column 4 lines 36-46.	<p>In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.</p> <p>Both the arrangement of signal units in signal words and the locations, timings, and lengths of signal words in individual transmissions or groups of transmissions may vary in fashions that can only be interpreted accurately by apparatus that are preprogrammed with the keys to such variations.</p>	<p>Page 13 lines 19-24.</p> <p>Page 14 lines 13-25.</p>	<p>[The means and methods of this invention] also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.</p> <p>In television audio, [signals] are likely to lie between eight and fifteen kilohertz. In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming in the conventional transmission stream but will include instructions that receiver station apparatus are preprogrammed to process that instruct receiver apparatus to separate the signals from the conventional programming and process them differently. In all cases, signals may convey information in discrete words, transmitted at separate times or in</p>

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			<p>separate locations, that receiver apparatus must assemble in order to receive one complete instruction.</p> <p>SPAM messages are composed of elements--headers, execution segments, meter-monitor segments, and information segments--whose bit lengths vary. SPAM apparatus determine the bit length of said elements in different fashions, and the particular fashion that applies to any given element relates to the priority of said element for subscriber station speed of processing. First priority segment information has the highest priority for speedy processing and is of fixed binary bit length. A SPAM header is one example of a first priority segment. An execution segment is another example. Intermediate priority segment information has lower priority, varies in bit length, but contains internal length information. A Meter-monitor segment is one example of an intermediate priority segment. Lowest priority segment information has the lowest priority, varies in length, and contains no internal information for determining segment length. Each information segment is an example of a lowest priority segment.</p> <p>All subscriber station apparatus are fully preprogrammed to perform automatically each step of each example. No manual step is required at any station.</p>
			<p>Page 60 line 19 to page 61 line 1.</p> <p>Page 91 lines 18-20.</p>

166. The method of claim 165, wherein one of said plurality of keys programs said receiver station with a varying pattern.	Column 4 lines 36-46.	In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.	Page 13 lines 19-24.	[The means and methods of this invention] also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain
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Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.
Reference	Reference	Reference
Language	Language	Language
	<p>Both the arrangement of signal units in signal words and the locations, timings, and lengths of signal words in individual transmissions or groups of transmissions may vary in fashions that can only be interpreted accurately by apparatus that are preprogrammed with the keys to such variations.</p>	<p>at any given time will be able to process the signals correctly.</p> <p>In television audio, [signals] are likely to lie between eight and fifteen kilohertz. In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming in the conventional transmission stream but will include instructions that receiver station apparatus are preprogrammed to process that instruct receiver apparatus to separate the signals from the conventional programming and process them differently. In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.</p> <p>SPAM messages are composed of elements--headers, execution segments, meter-monitor segments, and information segments--whose bit lengths vary. SPAM apparatus determine the bit length of said elements in different fashions, and the particular fashion that applies to any given element relates to the priority of said element for subscriber station speed of processing. First priority segment information has the highest priority for speedy processing and is of fixed binary bit length. A SPAM header is one example of a first priority segment. An execution segment is another example. Intermediate priority segment information has lower priority, varies in bit length, but contains internal length information. A Meter-monitor segment is one example of an intermediate priority segment. Lowest priority segment information has the lowest priority, varies in length, and contains no internal information for determining segment</p>
		<p>Page 14 lines 13-25.</p> <p>Page 60 line 19 to page 61 line 1.</p>

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			length. Each information segment is an example of a lowest priority segment. All subscriber station apparatus are fully preprogrammed to perform automatically each step of each example. No manual step is required at any station.
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167. The method of claim 165, wherein one of said plurality of keys programs said receiver station with a pattern of composition.	Column 4 lines 36-46.	In addition, the pattern of the composition , timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly. Both the arrangement of signal units in signal words and the locations, timings, and lengths of signal words in individual transmissions or groups of transmissions may vary in fashions that can only be interpreted accurately by apparatus that are preprogrammed with the keys to such variations.	Page 13 lines 19-24. Page 14 lines 13-25.	[The means and methods of this invention] also include techniques whereby the pattern of the composition , timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly. In television audio, [signals] are likely to lie between eight and fifteen kilohertz. In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming in the conventional transmission stream but will include instructions that receiver station apparatus are preprogrammed to process that instruct receiver apparatus to separate the signals from the conventional programming and process them differently. In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.
			Page 60 line 19 to page 61 line 1.	SPAM messages are composed of elements--headers, execution segments, meter-monitor segments, and information segments--whose bit lengths vary. SPAM apparatus determine the bit length of said elements in different fashions, and the

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			Page 91 lines 18-20.	<p>particular fashion that applies to any given element relates to the priority of said element for subscriber station speed of processing. First priority segment information has the highest priority for speedy processing and is of fixed binary bit length. A SPAM header is one example of a first priority segment. An execution segment is another example. Intermediate priority segment information has lower priority, varies in bit length, but contains internal length information. A Meter-monitor segment is one example of an intermediate priority segment. Lowest priority segment information has the lowest priority, varies in length, and contains no internal information for determining segment length. Each information segment is an example of a lowest priority segment.</p> <p>All subscriber station apparatus are fully preprogrammed to perform automatically each step of each example. No manual step is required at any station.</p>
<p>168. The method of claim 165, wherein one of said plurality of keys programs said receiver station with a location of at least one of said second plurality of decryption signals.</p>	Column 4 lines 36-46.	<p>In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.</p> <p>Both the arrangement of signal units in signal words and the locations, timings, and lengths of signal words in individual transmissions or groups of transmissions may vary in fashions that can only be interpreted accurately by apparatus that are preprogrammed with the keys to such</p>	<p>Page 13 lines 19-24.</p> <p>Page 14 lines 13-25.</p>	<p>[The means and methods of this invention] also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.</p> <p>In television audio, [signals] are likely to lie between eight and fifteen kilohertz. In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming in the conventional transmission stream but will include instructions that receiver station</p>

		variations.		<p>apparatus are preprogrammed to process that instruct receiver apparatus to separate the signals from the conventional programming and process them differently. In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.</p> <p>SPAM messages are composed of elements--headers, execution segments, meter-monitor segments, and information segments--whose bit lengths vary. SPAM apparatus determine the bit length of said elements in different fashions, and the particular fashion that applies to any given element relates to the priority of said element for subscriber station speed of processing. First priority segment information has the highest priority for speedy processing and is of fixed binary bit length. A SPAM header is one example of a first priority segment. An execution segment is another example. Intermediate priority segment information has lower priority, varies in bit length, but contains internal length information. A Meter-monitor segment is one example of an intermediate priority segment. Lowest priority segment information has the lowest priority, varies in length, and contains no internal information for determining segment length. Each information segment is an example of a lowest priority segment.</p>
			<p>Page 60 line 19 to page 61 line 1.</p>	<p>SPAM messages are composed of elements--headers, execution segments, meter-monitor segments, and information segments--whose bit lengths vary. SPAM apparatus determine the bit length of said elements in different fashions, and the particular fashion that applies to any given element relates to the priority of said element for subscriber station speed of processing. First priority segment information has the highest priority for speedy processing and is of fixed binary bit length. A SPAM header is one example of a first priority segment. An execution segment is another example. Intermediate priority segment information has lower priority, varies in bit length, but contains internal length information. A Meter-monitor segment is one example of an intermediate priority segment. Lowest priority segment information has the lowest priority, varies in length, and contains no internal information for determining segment length. Each information segment is an example of a lowest priority segment.</p>
			<p>Page 91 lines 18-20.</p>	<p>All subscriber station apparatus are fully preprogrammed to perform automatically each step of each example. No manual step is required at any station.</p>

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169. The method of claim 165, wherein one of said plurality of keys programs said receiver station with a pattern of timing of the transmission of at least one of said second plurality of decryption signals.	Column 4 lines 36-46.	<p>In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.</p> <p>Both the arrangement of signal units in signal words and the locations, timings, and lengths of signal words in individual transmissions or groups of transmissions may vary in fashions that can only be interpreted accurately by apparatus that are preprogrammed with the keys to such variations.</p>	<p>Page 13 lines 19-24.</p> <p>Page 14 lines 13-25.</p> <p>Page 60 line 19 to page 61 line 1.</p>	<p>[The means and methods of this invention] also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.</p> <p>In television audio, [signals] are likely to lie between eight and fifteen kilohertz. In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming in the conventional transmission stream but will include instructions that receiver station apparatus are preprogrammed to process that instruct receiver apparatus to separate the signals from the conventional programming and process them differently. In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.</p> <p>SPAM messages are composed of elements--headers, execution segments, meter-monitor segments, and information segments--whose bit lengths vary. SPAM apparatus determine the bit length of said elements in different fashions, and the particular fashion that applies to any given element relates to the priority of said element for subscriber station speed of processing. First priority segment information has the highest priority for speedy processing and is of fixed binary bit length. A SPAM header is one example of a first priority segment. An execution segment is another example. Intermediate priority segment information has lower priority, varies in bit length, but</p>

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				<p>contains internal length information. A Meter-monitor segment is one example of an intermediate priority segment. Lowest priority segment information has the lowest priority, varies in length, and contains no internal information for determining segment length. Each information segment is an example of a lowest priority segment.</p> <p>All subscriber station apparatus are fully preprogrammed to perform automatically each step of each example. No manual step is required at any station.</p>
			Page 91 lines 18-20.	

170. The method of claim 165, wherein said step of selecting comprises selecting code necessary for decryption in accordance with one of said plurality of keys.	Column 20 lines 37-42.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200,	Page 477 lines 8-23.	<p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...</p> <p>By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")</p> <p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of</p>
		which, in a predetermined fashion, signal processor, 200, decrypts and transfers	Page 281 lines 1-6.	
			Page 282 line 2 to page 283 line 33.	

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					<p>example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p> <p>[The means and methods of this invention] also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.</p> <p>In television audio, [signals] are likely to lie between eight and fifteen kilohertz. In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming in the conventional transmission stream but will include instructions that receiver station apparatus are preprogrammed to process that instruct receiver apparatus to separate the signals from the conventional programming and process them differently. In all cases, signals may convey information in discrete</p>
			<p>to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.</p> <p>In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.</p> <p>Both the arrangement of signal units in signal words and the locations, timings, and lengths of signal words in individual transmissions or groups of transmissions may vary in fashions that can only be interpreted accurately by apparatus that are preprogrammed with the keys to such variations.</p>	<p>Page 478 lines 1-5.</p> <p>Page 13 lines 19-24.</p> <p>Page 14 lines 13-25.</p>	
		Column 4 lines 36-46.			

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			<p>words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.</p> <p>SPAM messages are composed of elements--headers, execution segments, meter-monitor segments, and information segments--whose bit lengths vary. SPAM apparatus determine the bit length of said elements in different fashions, and the particular fashion that applies to any given element relates to the priority of said element for subscriber station speed of processing. First priority segment information has the highest priority for speedy processing and is of fixed binary bit length. A SPAM header is one example of a first priority segment. An execution segment is another example. Intermediate priority segment information has lower priority, varies in bit length, but contains internal length information. A Meter-monitor segment is one example of an intermediate priority segment. Lowest priority segment information has the lowest priority, varies in length, and contains no internal information for determining segment length. Each information segment is an example of a lowest priority segment.</p> <p>All subscriber station apparatus are fully preprogrammed to perform automatically each step of each example. No manual step is required at any station.</p>
			<p>Page 60 line 19 to page 61 line 1.</p> <p>Page 91 lines 18-20.</p>

171. The method of claim 170, wherein said one of a decryption key and a decryption code includes said code	Column 4 lines 40-46.	Both the arrangement of signal units in signal words and the locations, timings, and lengths of signal words in individual transmissions or groups of transmissions may vary in fashions that can only be	Page 13 lines 19-24.	They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preformed regarding the patterns
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of a fashion for identifying or locating a plurality of signals necessary for decryption.	Column 14 lines 54-61.	If signal processor, 112, has been preprogrammed with the signal or signals or if it has been informed of the predetermined fashion for identifying and processing the the needed signal or signals in the incoming transmission from facility, 113, for example, where to look for the signals	Page 298 line 33 to page 299 line 1.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba.
			Page 289 line 22 to page 290 line 10.	In example #7, the controller, 20, of the signal processor, 200, of Fig. 4 is preprogrammed at a particular time with particular information that indicates that the subscriber of said station wishes to view said "Wall Street Week" program when transmission of said program on cable cable 13 commences. ... Receiving any given instance of please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to select particular WSW-on- CC13-at-particular-8:30 information in said received information, record said selected information at particular memory, and execute particular receive-authorizing-info-at- appointed-time instructions. ...
			Page 290 lines 11-12.	In a predetermined fashion, executing said instructions causes controller, 20,....
			Page 290 lines 26-30.	...causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200,....
			OR Page 298 lines 17-18.	Executing said 1st-stage-enable-WSW-program instructions causes controller, 20,....
			Page 298 line 34 to page 299 line 1.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba. ...

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	and when	Page 290 lines 11-17.	In a predetermined fashion, executing said instructions causes controller, 20, causes prepare to receive a particular enabling SPAM message at a particular time. Automatically, controller, 20, checks the time of the clock, 18, of signal processor, 200, periodically. At a particular commence-enabling time that is a predetermined interval prior to the aforementioned 8:30 PM time...	In a predetermined fashion, executing said instructions causes controller, 20, causes prepare to receive a particular enabling SPAM message at a particular time. Automatically, controller, 20, checks the time of the clock, 18, of signal processor, 200, periodically. At a particular commence-enabling time that is a predetermined interval prior to the aforementioned 8:30 PM time...
	and how,	OR Page 297 lines 20-21.	Subsequently, but still in the interval between said commence-enabling time and said 8:30 PM time, ...	Subsequently, but still in the interval between said commence-enabling time and said 8:30 PM time, ...
		Page 290 lines 11-12, lines 21-26.	In a predetermined fashion, executing said instructions causes controller, 20,.... transmits particular preprogrammed enable-next-program-on-CC13 information to the control processor, 39J, of said decoder, 30, and causes said control processor, 39J, to place one instance of said information at a particular controlled-function-invoking information location; causes the oscillator, 6,....	In a predetermined fashion, executing said instructions causes controller, 20,.... transmits particular preprogrammed enable-next-program-on-CC13 information to the control processor, 39J, of said decoder, 30, and causes said control processor, 39J, to place one instance of said information at a particular controlled-function-invoking information location; causes the oscillator, 6,....
		Page 291 lines 21-28.	In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, select the information of the execution segment in said message, and determine that said selected information matches the aforementioned instance of enable-next-program-on-CC13 information at said particular controlled-function-invoking information location. ...	In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, select the information of the execution segment in said message, and determine that said selected information matches the aforementioned instance of enable-next-program-on-CC13 information at said particular controlled-function-invoking information location. ...
	signal processor, 112, can transfer the signal to decryptor/interruptor, 115.	Page 295 line 30 to page 296 line 1.	Automatically, controller, 20, selects information of cipher key Ca from among the	Automatically, controller, 20, selects information of cipher key Ca from among the

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			299 lines 13-18.	<p>information of said portion; transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio information, using said key information and selected decryption cipher algorithm C, and outputting decrypted information of the audio portion....</p> <p>Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258. ...</p>
174. The method of claim 173, wherein each of said plurality of signals necessary for decryption provides a different decryption code.	Column 14 lines 54-61.	<p>If signal processor, 112, has been preprogrammed with the signal or signals</p> <p>or if it has been informed of the predetermined fashion for identifying and processing the the needed signal or signals in the incoming transmission from facility, 113,</p>	<p>Page 298 line 33 to page 299 line 1.</p> <p>Page 289 line 22 to page 290 line 10.</p>	<p>At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba.</p> <p>In example #7, the controller, 20, of the signal processor, 200, of Fig. 4 is preprogrammed at a particular time with particular information that indicates that the subscriber of said station wishes to view said "Wall Street Week" program when transmission of said program on cable cable 13 commences. ... Receiving any given instance of please-fully-enable- WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to select particular WSW-on- CC13-at-particular-8:30 information in said received information, record said selected information at particular memory, and execute particular receive-authorizing-info-at- appointed-time instructions. ...</p>

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		for example, where to look for the signals	Page 290 lines 11-12. Page 290 lines 26-30. OR Page 298 lines 17-18. Page 298 line 34 to page 299 line 1. Page 290 lines 11-17.	In a predetermined fashion, executing said instructions causes controller, 20,.... ...causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200,.... Executing said 1st-stage-enable-WSW-program instructions causes controller, 20,.... At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba. ... In a predetermined fashion, executing said instructions causes controller, 20, causes prepare to receive a particular enabling SPAM message at a particular time. Automatically, controller, 20, checks the time of the clock, 18, of signal processor, 200, periodically. At a particular commence-enabling time that is a predetermined interval prior to the aforementioned 8:30 PM time....
		and when	OR Page 297 lines 20-21. Page 290 lines 11-12, lines 21-26.	Subsequently, but still in the interval between said commence-enabling time and said 8:30 PM time, In a predetermined fashion, executing said instructions causes controller, 20,.... transmits particular preprogrammed enable-next-program-on-CC13 information to the control processor, 39J, of said decoder, 30, and causes said control processor, 39J, to place one instance of said information at a particular controlled-function-invoking
		and how,		

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			<p>information location; causes the oscillator, 6,....</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, select the information of the execution segment in said message, and determine that said selected information matches the aforementioned instance of enable-next-program-on-CC13 information at said particular controlled-function-invoking information location. ...</p> <p>Automatically, controller, 20, selects information of cipher key Ca from among the information of said portion; transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio information, using said key information and selected decryption cipher algorithm C, and outputting decrypted information of the audio portion....</p> <p>Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258. ...</p>
	<p>signal processor, 112, can transfer the signal to decryptor/interruptor, 115.</p>	<p>Page 291 lines 21-28.</p> <p>Page 295 line 30 to page 296 line 1.</p> <p>299 lines 13-18.</p>	

175. The method of claim 173, wherein at least two of said plurality of signals necessary for decryption	Column 20 lines 37-42.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200,	<p>Page 477 lines 8-23.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction</p>
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are used to decrypt different transmissions.		to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...	
		By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")	Page 281 lines 1-6.
	which, in a predetermined fashion, signal processor, 200, decrypts and transfers	... the information of said segments is encrypted prior to transmission ... The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ... Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".	Page 282 line 2 to page 283 line 33.
	to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)	Page 478 lines 1-5.

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176. The method of claim 175, wherein said different transmissions are received from different sources.	Column 20 lines 37-39.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200, ...	Page 477 lines 8-23.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating
			Page 281 lines 1-6.	By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called " covert control .")
	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 473 lines 3-13.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe ... instructions ...
			Page 477 lines 12-17.	... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....
			Page 477 lines 23-29.	... causes ... said decoder, 290, to detect and process properly the information of said second message.
			Page 478 lines 1-5.	(Whichever transmission method is employed the information of said second message can be

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			encrypted and caused to be decrypted in any of the methods described above-- for example, in the method of the first message of example #4.)
		Page 475 lines 1-2.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.

177. The method of claim 176, wherein one transmission signal contains said different transmissions.	Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.	Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions. The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.
Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Page 470 lines 1-3 and Page 470 lines 9-12.	...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...
Column 20 lines 33-36.	... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded	Page 470 lines 19-21. Page 476 line 34 to page 477 line 8.	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M. (An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is

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			digital form ...		<p>entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p>
				Page 477 lines 8-17.	
178. The method of claim 177, wherein said one transmission signal includes a television signal and said different transmissions comprise different portions of said television signal.	Column 14 lines 10-17.	Fig. 4C illustrates a configuration that permits a method that provides a signal or signals to signal processor, 106, prior to decryption		Page 291 lines 9-24.	<p>In the interval between said commence-enabling time and said 8:30 PM time, said head end is caused, in a predetermined fashion, to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions and ... enable-WSW instructions ... on the frequency of said master control channel. (Hereinafter said message is called the "local-cable-enabling-message (#7).")</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...</p>

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	<p>which signal or signals enables decryptor/interruptor, 107, to decrypt and/or pass programming transmissions it receives</p>	<p>Page 294 line 28 to page 295 line 34.</p>	<p>Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions.</p> <p>Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission, ... thereby causing said tuner, 215, to receive the information of cable channel 13 and output the audio and video portions of said information to matrix switch, 258, on the separate audio and video outputs of said tuner, 215. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of said audio portion inputted from said tuner, 215, to the output that outputs to a selected decryptor, 107, thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio). Automatically, controller, 20, ... causes decryptor, 107, to commence decrypting its received audio information, ...</p> <p>Automatically, controller, 20, causes matrix switch, 258, to transfer the information inputted from decryptor, 107, to the output that that outputs to signal processor, 200, thereby causing signal processor, 200, to receive said information at a particular third alternate contact of switch, 1, (that is not shown in Fig. 2). Automatically, controller, 20, ... causes switch, 1, to connect to said third contact, thereby inputting said information to mixer, 3; and causes mixer, 3, (by control transmission means via oscillator, 6) to transfer said information without any modification; causes the control processor, 39J, of decoder, 30, to cause the filter, 31, and</p>
<p>then signal processor, 106, searches in a predetermined fashion for a second signal or set of signals in the decrypted output of decryptor/interruptor, 107.</p>	<p>Page 296 lines 3-23.</p>		

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		modulator, 32, to transfer said information without any modification; causes said control processor, 39J,... to cause digital detector, 38, to commence inputting detected information to controller, 39; and causes said control processor, 39J, to commence waiting to receive the header information of a SPAM message.
		In due course, but still before said 8:30 PM time, said program originating studio embeds in the video portion and transmits particular SPAM check information that is not a SPAM message and consists only of a particular check sequence of binary information followed by an end of file signal. (Hereinafter said SPAM check information is called the "1st- WSW-decryption-check (#7).") ... Receiving the binary information of said check sequence at decoder, 30, causes digital detector, 38, to detect said information and causes control processor, 39J, to....
Page 300 lines 10-21.		
		Decryptor, 10, commences receiving said information, decrypting it using said key J information and transferring it to controller, 12, as quickly as controller, 12, accepts it. The process of decryption proceeds in a particular fashion. Said decrypt-a-00-header-message instructions cause controller, 20, to cause decryptor, 10, to transfer the first H bits without decrypting or altering said bits in any fashion, to decrypt and transfer the next X bits, to transfer the next L bits without decrypting or altering said bits, to decrypt and transfer the next MMS-L bits, and finally, to transfer any bits remaining after the last of said MMS-L bits without decrypting or altering said bits. In this fashion, the cadence information in said message, which is not encrypted, is transferred by decryptor, 10, to controller, 12, without
Column 14 lines 1-4.	Encrypted transmissions may be only partially encrypted.	

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		For example, only the video portion of the transmission may be encrypted. The audio portion may remain unencrypted.	Page 288 line 30 to page 289 line 4.	alteration. In example #7, the program originating studio that originates the "Wall Street Week" transmission transmits a television signal that consists of so-called "digital video" and "digital audio," well known in the art. Prior to being transmitted, the digital video information is doubly encrypted, The digital audio is transmitted in the clear.
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179. The method of claim 178, wherein said television signal contains at least one of said second plurality of decryption signals.	Column 14 lines 12-14.	... which signal or signals enables decryptor/interruptor, 107, to decrypt and/or pass programming transmissions it receives ...	Page 294 line 28 to page 295 line 34.	<p>Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions.</p> <p>Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission, ... thereby causing said tuner, 215, to receive the information of cable channel 13 and output the audio and video portions of said information to matrix switch, 258, on the separate audio and video outputs of said tuner, 215. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of said audio portion inputted from said tuner, 215, to the output that outputs to a selected decryptor, 107, thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio). Automatically, controller, 20, ... causes decryptor, 107, to commence decrypting its received audio information, ...</p>
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180. The method of claim 178, wherein a first portion of said one transmission signal contains said television signal and	Column 15 lines 13-14.	[the needed signal or signals] ... may be on a separate channel of programming that is, itself, encrypted in transmission.	Page 297 lines 20-29.
said at least one of said second plurality of decryption signals is transmitted in a second portion of said one transmission signal which is separate from said first portion of said one transmission signal.	Column 15 lines 8-11.	FIG 4E also illustrates how it may be necessary to decrypt a programming transmission on one channel	Page 294 lines 33-35. Page 294 lines 30-35.
		Subsequently, but still in the interval between said commence-enabling time and said 8:30 PM time, said program originating studio embeds in the audio portion and transmits a particular SPAM message that consists of ... 1st-stage-enable-WSW-program instructions as the information segment information, and an (Hereinafter said message is called the "1st-WSW-program-enabling-message (#7).") ... to cause selected apparatus to decrypt the audio portion of said transmission, Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission, ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its received information of said frequency (which information is received by means of its multi-channel cable system transmission input) to a selected output frequency and transfer said information at said frequency to matrix switch, 258. ... Automatically, controller, 20, causes matrix switch, 258, to transfer the information of said audio portion ... to a selected decryptor, 107, thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio). In due course, but still before said 8:30 PM time, said program originating studio embeds	Page 295 lines 6-30.
		in order to identify and process correctly the programming transmitted on another.	Page 300 lines 10-12,

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				Page 300 line 30 to page 301 line 3.	in the video portion and transmits particular SPAM check information ... Receiving said check-data-loaded signal causes controller, 20, under control of said 1st-stage-enable-WSW- program instructions, to cause the control processor, 39J, of decoder, 30, to transfer to controller, 20, selected information of said check sequence of binary information and compare said selected information to selected information of said 1st-stage-enable-WSW-program instructions. A match occurs at the station of Fig 4, indicating that decryptor, 224, is decrypting its received information correctly. ...controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video ... to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video....
				Page 299 lines 19-23.	
181. A method of controlling	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.		Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
				Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
				Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...

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a plurality of receiver stations	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...	
	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.	
each of which includes a television receiver,	Column 10 lines 30-39.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.	Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.	
	Column 19 lines 27-29.	...and also microcomputer, 205, may	Page 324 lines 23-31.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.	
			Page 445 line 24 to	... instructions causes controller, 20, to switch	

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		instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	page 446 line 1.
a signal detector,	Column 6 lines 23-30.	power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...	Page 446 lines 17-21.
		A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	Page 29 lines 4-15.
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.
a processor, and with each said receiver station adapted to	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Page 29 lines 4-7.
detect the presence of one or	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.

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more control signals and		Column 19 lines 60-65.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...	Page 25 line 33 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 26 line 4. Page 327 line 35 to page 328 line 13.	Said signal instructs microcomputer, 205, ... Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming

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				<p>schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C ...</p> <p>Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...</p> <p>Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message</p>
			<p>Page 84 lines 26-28.</p>	
			<p>Page 28 lines 26-27.</p>	
			<p>Page 49 lines 26-27.</p>	
			<p>Page 435 lines 16-18.</p>	
			<p>Page 248 lines 22-26 from example #5.</p>	
			<p>Page 250 lines 13-16 from example #5.</p>	
			<p>Page 252 lines 15-35 from example #5.</p>	
	<p>Column 19 lines 14-15.</p>	<p>... pass all program and channel identifiers on all programing being cablecast on the multi-channel system.</p>		

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				that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter- monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...
			Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
programmed to process	Column 9 lines 47-57.	The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a	Page 248 line 17 to page 249 line 5.	Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the

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				predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.
			Page 265 line 27 to Page 266 line 21.	Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ... After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.
	This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.		Page 250 lines 13-17.	Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command.
			Page 251 lines 8-11.	Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...
			Page 263 lines 19-24.	... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit

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downloadable code, said method comprising the steps of:	Column 19 lines 42-44. Column 3 lines 3-8.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission. The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 37 lines 26-28. Page 21 lines 20-24. Page 14 line 32 to page 15 line 2.	information to controller, 44. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission. The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...
	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	Page 59 lines 29-33. Page 25 lines 34-35. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. At this point, an instruction signal is generated at said program originating studio, ... The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses

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downloadable code which is effective	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	<p>page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 23 line 35 to page 24 line 16.</p>	<p>URS microcomputers, 205.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another</p>
			Page 44 lines 14-17.	
			Page 26 lines 20-28.	

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to control a receiver station apparatus and a	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 23 line 35 to page 24 line 16.	<p>example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes</p>
		generate several graphic video overlays, ...	Page 451 lines 7-11.	
		and to transmit these overlays to TV set, 202,	Page 26 lines 4-8.	
		upon command.	Page 44 lines 14-17.	
			Page 26 lines 20-28.	

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first code or datum to	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.	subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchronizing command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchronizing command ...
	Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 32 to page 15 line 2.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...
	Column 19 lines 14-15.	... pass all program and channel identifiers on all programming being cablecast on the multi-channel system.	Page 435 lines 16-18.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
			Page 248 lines 22-26 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C ...
			Page 250 lines 13-16 from example #5.	Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.
			Page 252 lines 15-35 from example #5.	Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...
				Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter

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serve as evidence of	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14.	<p>meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter- monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment)</p> <p>then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p>	<p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5)</p>

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				and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
			Page 268 line 28 to page 269 line 12 from example #5.	In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)
	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 31 line 30 to page 32 line 6.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information

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<p>passing of said downloadable code,</p> <p>each of said plurality of receiver stations having a target processor to process data;</p>	<p>Column 7 lines 59-60.</p> <p>Column 11 lines 3-5.</p> <p>Column 7 lines 37-39.</p>	<p>If [a signal or signals] are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.</p> <p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...</p> <p>... that enables buffer/comparator, 8, among other things, to assemble signal units from signal words.</p>	<p>Page 31 lines 18-22.</p> <p>Page 325 line 34 to page 326 line 7.</p> <p>Page 59 lines 29-33</p> <p>Page 37 lines 22 to page 38 line 10.</p>
		<p>should be recorded, ...</p> <p>If [a signal or signals] contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.</p> <p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>Controller, 39, 44, or 47, is preprogrammed to receive units of signal information, to assemble said units into signal words that subscriber station apparatus can receive and process, and to transfer said words to said apparatus. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate,</p>	

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			incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions a subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. Said controller, 39, 44, or 47, has one or more output ports for communicating signal information to said apparatus.
		Page 156 line 33.	Fig. 3A shows one such preferred controller, 39.
		Page 157 lines 5-7.	Buffer, 39C, and processor, 39D, are the second buffer and processor and perform protocol conversion functions.
		Page 14 lines 22-25.	In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.
		Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
transferring said downloadable code to a transmitter;	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission
	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	

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			<p>consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>	
	<p>Column 19 lines 43-44.</p> <p>Column 11 lines 38-39.</p>	<p>... instruction signals embedded in the "Wall Street Week" programming transmission.</p> <p>By comparing identification signals on the incoming programming ...</p>	<p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 21 lines 23-24.</p> <p>Page 327 line 35 to page 328 line 13.</p>	

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				<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>	
		Page 84 lines 26-28.		<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p>	
	At this point, an instruction signal is generated in the television studio originating the programming ...	Page 59 lines 29-33.		<p>At this point, an instruction signal is generated at said program originating studio, ...</p>	
		Page 90 lines 4-7.		<p>The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.</p>	
	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 26 lines 1-2.		<p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p>	
receiving one or more control signals at said transmitter station,	Column 19 lines 60-62.			<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p>	
said one or more control signals operating to execute	Column 19 line 64 to column 20 line 1.			<p>Page 37 lines 26 to page 38 line 8.</p>	

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<p>a portion of said downloadable code;</p>	<p>Column 19 lines 59-60.</p> <p>Column 19 lines 48-53.</p>	<p>Then the host says, "And here is what your portfolio did."</p> <p>These signals instruct microcomputer, 205, to</p>	<p>Page 26 lines 4-11.</p> <p>Page 451 line 3.</p> <p>Page 25 lines 33-34.</p> <p>Page 23 line 35 to page 24 line 16.</p>	<p>preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance</p> <p>And the Fig. 1C combining is displayed.</p> <p>Then the host says, "And here is what your portfolio did."</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of</p>

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			<p>generate several graphic video overlays, ...</p> <p>and to transmit these overlays to TV set, 202,</p> <p>upon command.</p>	<p>Page 451 lines 7-11.</p> <p>Page 26 lines 4-8.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	<p>instructions that is loaded and run is called a "program instruction set.")</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...</p>
		<p>Column 2 lines 63-66.</p> <p>Column 3 lines 3-8.</p>	<p>(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...</p> <p>The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits</p>	<p>Page 14 lines 27-29.</p> <p>Page 14 line 32 to page 15 line 2.</p>	<p>(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...</p> <p>The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded</p>
receiving a second code or datum which					

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operates to evidence a	Column 11 lines 38-39.	encoded together on a single line of video or sequentially in audio. By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	Page 327 line 35 to page 328 line 13. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	together on a single line of video or sequentially in audio. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.	Meter-monitor segments contain meter information and/or monitor information.
			Page 337 lines 1-19.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate

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function performed by said downloadable code; and	Column 11 lines 38-43.	<p>field distribution system, 93. Such records can provide automatically for each channel the informations Commission requires broadcast station operators to maintain as station logs.</p> <p>By comparing identification signals on the incoming programming with the programing schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p>	<p>contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in</p>

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	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	<p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
transferring said one or more control signals to said transmitter, and	Column 19 lines 60-65.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...	<p>Page 25 line 33 to page 26 line 2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203, transferred to microcomputer, 205, and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is</p>

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transmitting an information transmission comprising the downloadable code,	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.			preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
				Page 26 line 4.	Said signal instructs microcomputer, 205, ...
				Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
				Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening,	Column 19 lines 46-53.			Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and page 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
				Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program

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	several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.			<p>originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>Then the host says, "And here is what your</p>
			Page 44 lines 14-17.	
			Page 26 lines 20-28.	
said one or more	Column 19 lines 60-66.	At this point, an instruction signal is	Page 25 line 33 to page	

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control signals, and			generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...	26 line 2..	portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
				Page 37 line 26 to page 38 line 8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
				Page 26 lines 4-8.	Then the host says, "And here is what your portfolio did."
				Page 25 lines 33-34.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...
at least one of said first code or datum and		Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	Page 14 lines 27-29.	
		Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...		

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<p>Column 3 lines 3-8.</p> <p>Column 19 lines 14-15.</p>	<p>The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>... pass all program and channel identifiers on all programming being cablecast on the multi-channel system.</p>	<p>The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C ...</p> <p>Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...</p> <p>Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter-monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that</p>	<p>Page 14 line 32 to page 15 line 2.</p> <p>Page 435 lines 16-18.</p> <p>Page 248 lines 22-26 from example #5.</p> <p>Page 250 lines 13-16 from example #5.</p> <p>Page 252 lines 15-35 from example #5.</p>	

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said second code or datum.				includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...
	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a that enables buffer/comparator, 8, among other things, to assemble signal units from signal words.	Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
	Column 7 lines 37-39.		Page 14 lines 27-29. Page 37 lines 22 to page 38 line 10.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ... Controller, 39, 44, or 47, is preprogrammed to receive units of signal information, to assemble said units into signal words that subscriber station apparatus can receive and process, and to transfer said words to said apparatus. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is

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			<p>preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions a subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. Said controller, 39, 44, or 47, has one or more output ports for communicating signal information to said apparatus.</p>
			<p>Fig. 3A shows one such preferred controller, 39.</p>
			<p>Buffer, 39C, and processor, 39D, are the second buffer and processor and perform protocol conversion functions.</p>
			<p>In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.</p>
			<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution</p>

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			<p>amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
			<p>Page 84 lines 26-28.</p>
			<p>Page 28 lines 26-27.</p>
			<p>Page 49 lines 26-27.</p>

182. The method of claim 181, wherein a television program is displayed at a receiver station and said downloadable code	Column 19 lines 28-29.	...and tuner, 215, to tune appropriately to "Wall Street Week."	<p>... and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....</p>
programs said receiver station processor or computer to	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205,</p>

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output video, audio, or text in the context of said television program or to	Column 19 lines 48-53.			evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
			Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a
			Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
			Page 24 lines 5-16.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
		These signals instruct microcomputer, 205, to generate several graphic video overlays, ...	Page 451 lines 7-11.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not

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		... which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to ...	Page 19 line 29 to page 20 line 20.	one but a plurality overlays. The combining of Fig. 1C is merely the first. Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.
		... transmit these overlays to TV set, 202,...	Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
process a viewer reaction to said television program or to	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market

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select information that supplements said television program content.	Column 19 lines 64-66.	generated graphic is pictured. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 26 lines 1-8.	over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to generate several graphic video overlays, ...	Page 24 lines 5-16. Page 451 lines 7-11.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
		... which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to ...	Page 19 line 29 to page 20 line 20.	Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.

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		... transmit these overlays to TV set, 202,...	Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
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183. The method of claim 181, wherein said information transmission is transmitted to two of said plurality of receiver stations at the same time and each of said two receiver stations respond to some part of said control signal or downloadable code at the same time.	Column 4 lines 36-40. <i>And, for example</i> Column 19 lines 42-44.	In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly. Microcomputer, 205, is preprogramed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programing transmission.	Page 13 lines 19-24. <i>And, for example</i> Page 21 lines 20-24.	They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly. Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
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184. The method of claim 181, wherein said information transmission is transmitted to two of said plurality of receiver stations at different times and each of said two receiver stations receive and respond to said control signal or said downloadable code asynchronously.	Column 4 lines 36-40. <i>And, for example</i> Column 19 lines 42-44.	In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly. Microcomputer, 205, is preprogramed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programing transmission.	Page 13 lines 19-24. <i>And, for example</i> Page 21 lines 20-24.	They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly. Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
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185. The method of claim 181, further comprising the steps of receiving said download code at a receiver in the transmitter station, communicating said download code from said receiver to	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
a memory location, and storing said download code at said memory location for a	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....
			Page 59 lines 29-33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a pre-determined fashion ...	Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received

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<p>period of time prior to communicating said downloadable code to a transmitter.</p>	<p>Column 10 line 66 to Column 11 line 1.</p>	<p>One is the conventional path whereby programing has flowed and continues to flow to recording devices, 76 and 78, and/or to flow to field distribution system, 93.</p>	<p>Page 36 line 32 to page 37 line 3</p> <p>Page 325 lines 21-24.</p> <p>Page 324 line 31 to page 325 line 4.</p>	<p>information in a predetermined fashion.</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs</p> <p>One path is the conventional path whereby programming flows from each given receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, to matrix switch, 75.</p> <p>Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire to a conventional matrix switch, 75, well known in the art, that outputs to one or more recorder/players, 76 and 78, and/or to apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.</p>	
<p>186. The method of claim 181, wherein at least one receiver station is adapted to detect the presence of said control signal or programmed to respond to said downloadable code on the basis of a pattern of signal composition, said method further</p>	<p>Column 4 lines 36-40.</p> <p><i>And, for example</i> Column 9 lines 47-57.</p>	<p>In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.</p> <p>The controller, 20, is programed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be</p>	<p>Page 13 lines 19-24.</p> <p><i>And, for example</i> Page 248 line 17 to page 249 line 5.</p>	<p>They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.</p> <p>Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the</p>	

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	<p>selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.</p>	<p>standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from</p>
	<p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>Page 257 line 24 to page 258 line 19.</p> <p>Page 257 line 24 to page 258 line 19.</p>

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		<p>This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.</p>	<p>Page 265 line 27 to Page 266 line 21.</p> <p>Page 250 lines 13-17.</p> <p>Page 251 lines 8-11.</p> <p>Page 263 lines 19-24.</p>	<p>the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p> <p>... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.</p>

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comprising the step of composing at least some of said control signal or said downloadable code in said pattern.	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 37 lines 26-28.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.
			Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
			Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...

187. The method of claim 181, wherein at least one receiver station is adapted to detect the presence of said control signal or programmed to respond to said downloadable code on the basis of the location of a signal in an information	Column 4 lines 36-40. <i>And, for example</i> Column 9 lines 47-57.	In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly. The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time	Page 13 lines 19-24. <i>And, for example</i> Page 248 line 17 to page 249 line 5.	They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly. Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless")
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transmission, said method further comprising the step of		<p>interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.</p> <p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in</p>

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		<p>a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synchronizing command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p> <p>... said information to radio decoder, 42, which decodes the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said</p>
	<p>This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.</p>	<p>Page 265 line 27 to Page 266 line 21.</p> <p>Page 250 lines 13-17.</p> <p>Page 251 lines 8-11.</p> <p>Page 263 lines 19-24.</p>

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causing at least some of said control signal or downloadable code to be transmitted in said location.	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.		Page 37 lines 26-28.	command and transfers said binary and bit information to controller, 44. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.
				Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
				Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
				Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
188. The method of claim 181, wherein at least one receiver station is adapted to detect the presence of said control signal or programmed to respond to said downloadable	Column 4 lines 36-40.	In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.		Page 13 lines 19-24.	They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.

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code on the basis of a timing pattern of signal transmission, said method further comprising the step of	<p><i>And, for example</i> Column 9 lines 47-57.</p>	<p>The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.</p>	<p><i>And, for example</i> Page 248 line 17 to page 249 line 5.</p>	<p>Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to</p>
		<p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>Page 257 line 24 to page 258 line 19.</p>	

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			<p>decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping in track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p> <p>... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits</p>
		Page 265 line 27 to Page 266 line 21.	
	This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.	Page 250 lines 13-17.	
		Page 251 lines 8-11.	
		Page 263 lines 19-24.	

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causing at least some of said control signal or said downloadable code to be transmitted in accordance with said pattern.	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 37 lines 26-28.	said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.
			Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
			Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...

189. A method of controlling	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially
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a remote intermediate mass medium transmitter station to	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.		Page 25 line 34 to page 26 line 1. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 324 lines 8-24.	transmitted SPAM messages. At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ... The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
communicate program material to a remote receiver station and	Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ...		Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...
	Column 12 lines 57-61.	This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio		Page 339 lines 9-26.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming; however, the intermediate

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controlling said remote receiver station to process a receiver specific response, said method of controlling comprising the steps of:		Column 7 lines 50-54.	programming and other electronic data according to the methods described here ...	Page 31 lines 10-14.	station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ... Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both.
receiving a unit of mass medium programming to be		Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
transmitted by the remote intermediate mass medium transmitter station and		Column 12 lines 45-46.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming ...	Page 337 lines 3-10.	In field distribution system, 93, amplifier, 94, inputs ... all programming transmitted by the cable television system head end station...
delivering said unit of mass medium programming to a transmitter;		Column 19 lines 62-63	... and [the instruction signal] is transmitted in the programming transmission.	Page 25 line 34 to page 26 line 1.	... an instruction signal is ... embedded in the programming transmission, and transmitted.
receiving		Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission

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one or more instruct signals and			<p>Page 25 lines 34-35.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p>	<p>consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, ...</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.</p>
	Column 4 lines 14-17.	The embedded signals may run and repeat continuously throughout the programing or they may run only occasionally or only once.	Page 14 lines 3-5.	In programing transmissions, given signals may run and repeat, for periods of time, continuously or at regular intervals. Or they may run only occasionally or only once.
	Column 19 lines 14-15.	... pass all program and channel identifiers on all programing being cablecast on the multi-channel system.	Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C ...
			Page 248 lines 22-26 from example #5.	Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.
			Page 250 lines 13-16 from example #5.	Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...
			Page 252 lines 15-35 from example #5.	Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter

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a first code	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ...	<p>Page 267 lines 20-28 from example #5.</p> <p>Page 14 lines 27-29.</p>	<p>meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter- monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...</p>

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or datum at said remote intermediate mass medium transmitter station, said one or more instruct signals operate	Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 32 to page 15 line 2.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
at the remote receiver station to	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.	Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...
			Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
			Page 268 line 28 to page 269 line 12 from example #5.	In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred-- together with its newly added header

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control a receiver station apparatus and	Column 7 lines 50-60.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 31 lines 10-22.	information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).) Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.	
said first code or	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a programming unit, or a ...	Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	
datum operate to	Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 32 to page 15 line 2.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	
serve as evidence of the	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 31 line 30 to page 32 line 6.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16,	

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<p>passing of said one or more instruct signals to a controllable device or of the</p> <p>functioning of said controllable apparatus in response to said one or more instruct signals, and</p> <p>communicating said one or more instruct signals and said first code or datum to said transmitter;</p>	<p>Column 7 lines 47-49.</p> <p>Column 7 lines 59-60.</p> <p>Column 19 lines 60-63.</p>	<p>Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.</p> <p>If [a signal or signals] are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.</p>	<p>Page 30 lines 29-30.</p> <p>Page 31 lines 18-22.</p> <p>Page 59 lines 29-33.</p>	<p>and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...</p> <p>Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.</p> <p>If [a signal or signals] contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p>
<p>receiving one or more control signals at said remote intermediate</p>	<p>Column 11 lines 39-41.</p>	<p>... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, ...</p>	<p>Page 328 lines 9-10.</p>	<p>... with information of the programming schedule, received earlier from input, 74, and/or network, 98, ...</p>

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mass medium transmitter station,		Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, ...	Page 326 lines 28-30. Page 325 line 34 to page 326 line 10.	... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98. At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station; automatically adds, in a predetermined fashion, source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, ...
said one or		Column 11 lines 39-43.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 328 lines 9-13.	... said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
more control signals		Column 11 lines 3-14.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, along with information identifying the channel source of each signal, externally to code reader, 72. ... Code reader, 72, passes the received	Page 326 lines 28-30. Page 325 line 34 to page 326 line 11.	... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98. At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68,

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control the communication of said unit of programming, said one or more instruct signals, and said first code or datum	Column 11 lines 50-57.	signals, with channel identifiers, to cable program controller and computer, 73.	69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station, automatically adds, in a predetermined fashion source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72. Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.	
	Column 4 lines 5-6. Column 12 lines 45-47.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87. These techniques employ signals embedded in programs. Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits	Page 326 lines 16-18. Page 328 line 22 to page 329 line 1. Page 13 lines 25-26. Page 337 lines 1-8.	The present invention employs signals embedded in programming. Fig. 6 shows particular signal processor system monitoring apparatus associated with

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medium transmitter station to said receiver station;			programming to signal processor, 71, and signal processor, 96, ...		the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...
receiving a second	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...		Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station,...
code or	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...		Page 59 lines 29-33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
datum which operates to	Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits		Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...
				Page 14 line 32 to page 15 line 2.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded

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identify said unit of mass medium programming; and		Column 11 lines 38-39.	encoded together on a single line of video or sequentially in audio. By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	together on a single line of video or sequentially in audio. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
				Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...
				Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
				Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
transmitting from said remote intermediate mass medium transmitter station an information transmission comprising		Column 12 lines 45-46.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming ...	Page 337 lines 3-10.	In field distribution system, 93, amplifier, 94, inputs ... all programming transmitted by the cable television system head end station...

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said unit of mass medium programming,	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 446 lines 17-21. Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
	Column 4 lines 14-17. Column 19 lines 14-15.	The embedded signals may run and repeat continuously throughout the programming or they may run only occasionally or only once. ... pass all program and channel identifiers on all programming being cablecast on the multi-channel system.	Page 14 lines 3-5. Page 435 lines 16-18. Page 248 lines 22-26 from example #5.	In programming transmissions, given signals may run and repeat, for periods of time, continuously or at regular intervals. Or they may run only occasionally or only once. In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C ... Via a conventional multi-channel cable transmission, in a fashion well known in the

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			<p>art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...</p> <p>Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter- monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new</p>
		<p>Page 250 lines 13-16 from example #5.</p> <p>Page 252 lines 15-35 from example #5.</p> <p>Page 267 lines 20-28 from example #5.</p>	

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said first code or datum.		Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.	programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
		Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 32 to page 15 line 2.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ... The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
190. The method of claim 189, wherein said one or more control signals are effective at the remote transmission station to		Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each

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control one or	Column 11 lines 57-65.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 329 line 2-22.</p>	<p>received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.</p>

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more of a	Column 11 lines 66 to Column 12 line 8.	Recorder/players, 76 and 78, can communicate programming with each other through matrix switch, 75.	Page 332 lines 24-30.
		If controller/ computer, 73, determines at any time that it is necessary	Page 333 lines 15-21.
		to reorganize the order in which programming units are stored on either recorder/player or on both,	Page 331 lines 17-33.
			Page 331 lines 16-25.
		... causes computer, 73, ... to cause switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record ... unit D.	
		Computer, 73, causes ... switch, 75, to configure its switches so as to transfer the output of recorder, 78, to the input of recorder, 76. Computer, 73, causes recorder, 78, to play and recorder, 76, to record for the duration of program unit Y.	
		Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. ... Caused to organize the locations of said units to play according to said schedule, computer 73, ...	
		Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D—are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first.	
		In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder	Page 334 lines 1-6.

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	<p>controller/computer, 73, can use techniques for reorganizing files stored on multidisk units, which techniques are well known to computer operators, and order the execution of such techniques by passing appropriate instructions to of matrix switch, 75, and recorder/ players, 76 and 78.</p>	<p>Page 331 line 17 to page 334 line 6</p> <p>For example, page 331 lines 17-33.</p>	<p>because unit D is scheduled to play on the same channel immediately after Y.</p> <p><i>See generally.</i></p> <p>Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D--are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first. According to the schedule recorded at computer, 73, Q should play first on the cable channel modulated by cable channel modulator, 83; then subsequently Y and W should start to play simultaneously on the channels modulated by modulators, 83 and 87 respectively; then D should play on the channel modulated by modulator, 83, immediately after Y ends. Caused to organize the locations of said units to play according to said schedule, computer 73, ...</p> <p>Determining said located space to be available causes computer, 73, to cause recorder, 76, to move forward or rewind to the start of program unit D; to cause recorder, 78, to rewind to the start of said located space; and to cause switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record for the duration of program unit D. ...</p> <p>Computer, 73, causes recorder, 78, to move</p>
		<p>For example, page 332 lines 23-31.</p>	
		<p>For example, page 333</p>	

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<p>plurality of selective transfer devices prior to a specific time.</p>				lines 15-21.	forward or rewind to the start of program unit Y; causes recorder, 76, to rewind to the start of the available space; and causes switch, 75, to configure its switches so as to transfer the output of recorder, 78, to the input of recorder, 76. Computer, 73, causes recorder, 78, to play and recorder, 76, to record for the duration of program unit Y. ...
		Column 10 lines 41-43.	... by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, ...	For example, page 334 lines 1-6.	In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder because unit D is scheduled to play on the same channel immediately after Y.
		Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 324 line 34-35. Page 326 line 33 to page 327 line 2.	... a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78, Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...
<p>191. The method of claim 189, further comprising the step of embedding one of said one or more control signals in said unit of mass medium programming before</p>				Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
		Column 19 lines 43-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
				Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as

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				the first series.	
				In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	
				Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...	
				Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.	
				By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	
				SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...	
				Page 37 line 26 to page 38 line 8.	
				Page 24 lines 5-6.	
				Page 327 line 35 to page 328 line 13.	
				Page 84 lines 26-28.	
				These signals instruct microcomputer, 205, ...	
				By comparing identification signals on the incoming programming ...	
				Column 11 lines 38-39.	

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transmitting said unit of mass medium programming to said remote transmitter station.			... monitor information that identifies what programming is available, ...
	Column 19 lines 62-63	... and [the instruction signal] is transmitted in the programing transmission.	Meter-monitor segments contain meter information and/or monitor information.
	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	... an instruction signal is ... embedded in the programming transmission, and transmitted.
			Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
			A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a

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			Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
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192. The method of claim 189, wherein said one or more control signals is effective at the remote transmitter station to communicate said unit of mass medium programming to a plurality of transmitters.	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 84 lines 26-28.	... monitor information that identifies what
			Page 28 lines 26-27.	

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			programming is available, ...	
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.

193. The method of claim 189, wherein said one or more control signals include a schedule which identifies said unit of mass medium programming based on	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
said second code or datum, said method further comprising the	Column 11 lines 21-24.	Such input information might include the cable television system's complete programming schedule, with each discrete	Page 326 lines 30-33.	Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of

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step of:		Column 11 lines 38-39.	unit of programming identified with a unique program code ... By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	programming identified by its own "program unit identification code" information. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
				Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...
				Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
				Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
				Page 328 lines 9-10.	... with information of the programming schedule, received earlier from input, 74, and/or network, 98, ...
transmitting a schedule which operates at the remote transmitter station to communicate said unit of medium programming to a transmitter at a specific	Column 11 lines 39-41.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, ...	Page 326 lines 28-30.	... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.	

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time.		Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...
194. A method of controlling a remote intermediate data transmitter station to communicate data to one or more receiver stations, with said remote transmitter station including	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.	Page 59 lines 29-33. Page 25 line 34 to page 26 line 1. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 324 lines 18-21.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ... Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
a broadcast or cablecast	Column 10 lines 15-20.	Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. FIGS. 3A, 3B, and 3C illustrate the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 324 lines 8-17.	The signal processing apparatus outlined in

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transmitter for transmitting one or more signals which are effective at a receiver station to instruct a computer or processor,		FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	
	Column 10 lines 43-47.	... and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 325 lines 1-4.
a plurality of selective transfer devices each operatively connected to said broadcast or cablecast transmitter,	Column 10 lines 41-43.	... by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, ...	Page 324 line 34-35.
a data receiver for receiving information from an origination transmitter station,	Column 10 lines 30-39.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.	Page 324 lines 23-31.
	Column 19 lines 60-63.	At this point, an instruction signal is	Page 59 lines 29-33.
		Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.	
		... apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	
		... a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78,	
		The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.	
		A SPAM message is the modality whereby the	

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a control signal detector, and		generated in the television studio originating the programming and is transmitted in the programming transmission.		original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...	Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
			Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
			Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....
			Page 59 lines 29-33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed

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a controller or computer capable of controlling	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
one or more of said selective transfer devices, and with said remote transmitter station adapted to	Column 11 lines 15-17.	Cable program controller and computer, 73, is the central automatic control unit for the transmission facility.	Page 326 lines 19-20.	This base band signal is then transferred through separate paths to three separate detector devices.
detect the presence of one or more control signals,	Column 11 lines 44-46.	Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Page 328 lines 14-16.	Cable program controller and computer, 73, is the central automatic control unit for the transmission station.
	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...	Page 325 line 34 to page 326 line 7.	Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78,
			Page 59 lines 29-33	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....
				A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate

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to control the communication of said one or more instruct signals	Column 8 lines 58-59.	detector devices. Control signals can be passed to the apparatus by means of the programming transmissions ...	Page 59 lines 29-33.	detector devices. A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
in response to said one or more control signals, and	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
	Column 11 lines 38-46.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has

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<p>to deliver at said broadcast or cablecast transmitter said one or more instruct signals, said method comprising the steps of:</p>	<p>Column 11 lines 50-57.</p>	<p>programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.</p> <p>... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 lines 14-16.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion,</p>

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receiving at said origination transmitter station an instruct signal to be transmitted by the remote intermediate data transmitter station and		Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	Page 59 lines 29-33.	so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
delivering said instruct signal to an origination transmitter, said instruct signal being effective at the receiver station to		Column 19 lines 62-63	... and [the instruction signal] is transmitted in the programming transmission.	Page 25 lines 34-35. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, ... The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205. ... an instruction signal is ... embedded in the programming transmission, and transmitted.
		Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.	Page 435 lines 16-18. Page 267 lines 20-28 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5)

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generate output information content which is effective to control a receiver station apparatus and	Column 19 lines 20-25.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	Page 268 line 28 to page 269 line 12 from example #5.	<p>signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ...</p> <p>Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)</p>
			Page 436 line 9 to page 437 line 6.	<p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is</p>

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				<p>preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...</p>
			<p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p> <p>Page 14 lines 27-29.</p>	
to communicate a first code or datum to serve	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ...		

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	Column 3 lines 3-8.	<p>The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p>	Page 14 line 32 to page 15 line 2.	<p>The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p>	
as evidence of the	Column 7 lines 65-67.	<p>Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.</p>	Page 31 line 30 to page 32 line 6.	<p>Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...</p>	
passing of said instruct signal to a controllable device or	Column 7 lines 47-49.	<p>Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.</p>	Page 30 lines 29-30.	<p>Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.</p>	
of the functioning of said controllable apparatus in response to said instruct signal,	Column 7 lines 50-60.	<p>Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.</p>	Page 31 lines 10-22.	<p>Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.</p>	

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receiving one or more control signals which at the remote intermediate data transmitter station operate to control the communication of said instruct signal; and	<p>Column 19 lines 60-62.</p> <p>Column 11 lines 38-43.</p>	<p>Page 439 lines 9-15.</p> <p>Page 59 lines 29-33.</p> <p>Page 25 lines 34-35.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 327 line 35 to page 328 line 13.</p>	<p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;...</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, ...</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a</p>

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	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	<p>Page 84 lines 26-28.</p> <p>predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Page 28 lines 26-27.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The</p>	
transferring said one or more control signals to said origination transmitter	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	

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			<p>information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p>	
	<p>Column 11 lines 38-39.</p> <p>By comparing identification signals on the incoming programming ...</p>		<p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
			<p>Page 84 lines 26-28.</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in</p>

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before a specific time,	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 28 lines 26-27. Page 49 lines 26-27. Page 326 line 33 to page 327 line 2.	television or radio or other programming transmissions monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information. Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...
said origination transmitter transmitting said instruct signal, said first code or datum, and said one or more control signals.	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
			Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and page 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator,	Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...

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	14.			Page 267 lines 20-28 from example #5.	<p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ...</p> <p>Automatically, control processor, 121, transfers to buffer/comparator, 14, via matrix switch, 121, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)</p> <p>(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...</p>
	Column 2 lines 63-66.		(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.	
	Column 3 lines 3-8.		The term "signal word" hereinafter means one full discrete appearance of a signal as	Page 14 line 32 to page 15 line 2.	The term "signal word" hereinafter means one full discrete appearance of a signal as

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	Column 11 lines 38-39.	<p>embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>By comparing identification signals on the incoming programming ...</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
			Page 84 lines 26-28.	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...</p>
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.

195. The method of claim 194, wherein said	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned
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<p>one or more control signals include a schedule which identifies said unit of mass medium programming based on a second code or datum, said method further comprising the step of:</p>			<p>schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>		<p>dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
				Page 84 lines 26-28.	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p>
				Page 28 lines 26-27.	<p>... monitor information that identifies what programming is available, ...</p>
				Page 49 lines 26-27.	<p>Meter-monitor segments contain meter information and/or monitor information.</p>
	Column 11 lines 21-24.		<p>Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ...</p>	Page 326 lines 30-33.	<p>Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.</p>
transmitting a second instruct signal which	Column 11 lines 39-41.		<p>... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, ...</p>	Page 328 lines 9-10.	<p>... with information of the programming schedule, received earlier from input, 74, and/or network, 98, ...</p>
				Page 326 lines 28-30.	<p>... receiving input information from local input, 74, and from remote stations via</p>

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operates at the remote intermediate data transmitter station at said specific time to	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	<p>telephone or other data transfer network, 98.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular</p>
communicate said instruct signal to a transmitter.	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	

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		from TV receiver, 53, to the output that leads to modulator, 87.		preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
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196. The method of claim 194, wherein said specific time is a scheduled time of transmitting	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...
said instruct signal or a program associated with said instruct signal from said remote intermediate data transmitter station and	Column 11 lines 21-22.	Such input information might include the cable television system's complete programming schedule, ...	Page 326 lines 30-31.	Such input information can include the complete programming schedule of the station of Fig. 6, ...
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of

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		Column 12 lines 58-61.		Page 84 lines 26-28. Page 28 lines 26-27. Page 49 lines 26-27. Page 339 lines 11-23.	Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions monitor information that identifies what programming is available , ... Meter-monitor segments contain meter information and/or monitor information. ... however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming ...
	said one or more control signals is effective at the remote intermediate data transmitter station to control one or more of said plurality of selective transmission devices	Column 11 lines 57-65.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 2-22.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed

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at different times.	Column 11 lines 30-31.	... transmit each program unit to cable field distribution system, 93.	Page 326 line 35 to page 327 line 2. Page 328 line 13.	fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming. ... each program unit, ... the station should transmit the unit, transmit the programming of each received program unit.
	Column 10 lines 49-52.	When played on video recorder and players, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted to the field.	Page 325 lines 6-9.	When played on video recorders, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted via switch 75 to field distribution system, 93.

197. A method for delivering at least one control signal and	Column 20 lines 27- 31.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 ...	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions,
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computer programming to a subscriber and	Column 9 lines 21-23.	[The Controller, 20] is interactive with external sources via telephone connection, 22, and ...	Page 273 lines 6-19.	and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ... Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a particular instruct-to- receive signal. Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.
		... can be reprogramed from such remote sources.	Page 537 lines 6-17.	At 3:10 AM, GMT, said <i>European master network station</i> transmits particular SPAM message information, embedded in the information of said master transmission, including a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain operating system instructions. In so doing, said European master network station inputs operating system instructions to all SPAM apparatus and receiver station computers, 73, and microcomputers, 205, thereby causing said apparatus and computers, 73 and 205, as described above in "PREPROGRAMMING RECEIVER STATION OPERATING SYSTEMS," to commence operating under control of the instructions of said operating systems. ... particular information of said
			with respect to page	

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<p>billing said subscriber for use of said at least one control signal and said computer programming</p> <p>in a communications network, said</p>	<p>Column 20 lines 56-57.</p> <p>Column 9 lines 21-22.</p>	<p>... that site can determine for billing purposes that the recipe was, ...</p> <p>[The controller, 20] is interactive with external sources via telephone connection,</p>	<p>555 line 24 to page 556 line 14.</p> <p>Page 44 lines 26-30.</p> <p>Page 471 lines 26-31.</p> <p>Page 473 lines 3-8.</p> <p>Page 273 lines 6-19.</p>	<p>TELEPHON.EXE module that causes ... signal processor, 200, to transmit the information ... via telephone network in the fashion of example #10, to a computer at a particular remote data collection station.</p> <p>Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each farmer expects to harvest during the 2027 growing season. Automatically, the received data is aggregated, in a fashion well known in the art, at the computer of said <i>European master network</i> origination and control station ...</p> <p>Then, at 3:59 PM, on Thursday, February 18, 2027, the cycle of generating and communicating information of farmers is repeated ...</p> <p>... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information, ...</p> <p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...</p> <p>Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and</p>

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communications network having at least one transmitter station and			22, ... See Fig. 1		causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a particular instruct-to- receive signal. Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.
at least one receiver station,	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	See Fig. 2. Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.	
said at least one transmitter station being capable of communicating programming instructions,	Column 9 lines 21-23.	[The Controller, 20] is interactive with external sources via telephone connection, 22, and ...	Page 396 lines 8-10. Page 273 lines 6-19.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples. Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of	

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		... can be reprogrammed from such remote sources.	<p>Page 537 lines 6-17.</p> <p>with respect to page 555 line 24 to page 556 line 14.</p>	<p>ROM, 21, to said first computer followed by a particular instruct-to- receive signal. Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.</p> <p>At 3:10 AM, GMT, said <i>European master network station</i> transmits particular SPAM message information, embedded in the information of said master transmission, including a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain operating system instructions. In so doing, said <i>European master network station</i> inputs operating system instructions to all SPAM apparatus and receiver station computers, 73, and microcomputers, 205, thereby causing said apparatus and computers, 73 and 205, as described above in "PREPROGRAMMING RECEIVER STATION OPERATING SYSTEMS," to commence operating under control of the instructions of said operating systems.</p> <p>... particular information of said TELEPHON.EXE module that causes ... signal processor, 200; to transmit the information ... via telephone network in the fashion of example #10, to a computer at a particular remote data collection station.</p> <p>Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each farmer expects to harvest during the 2027 growing season. Automatically, the received data is aggregated, in a fashion well known in the art, at the computer of said <i>European master network</i> origination and control station ...</p> <p>Then, at 3:59 PM, on Thursday, February</p>

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said at least one receiver station having an input device for inputting a command,		Column 5 lines 16-20.	[The apparatus] has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions.	Page 16 lines 6-10.	18, 2027, the cycle of generating and communicating information of farmers is repeated ... [The apparatus] has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions.
		Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
at least one processor for		Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
receiving said programming instructions and		Column 9 lines 21-23.	[The Controller, 20] is interactive with external sources via telephone connection, 22, and ...	Page 273 lines 6-19.	Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a particular instruct-to- receive signal. Said instruct-to-receive signal causes said first

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		<p>... can be reprogramed from such remote sources.</p>	<p>Page 537 lines 6-17.</p>	<p>computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.</p> <p>At 3:10 AM, GMT, said <i>European master network station</i> transmits particular SPAM message information, embedded in the information of said master transmission, including a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain operating system instructions. In so doing, said <i>European master network station</i> inputs operating system instructions to all SPAM apparatus and receiver station computers, 73, and microcomputers, 205, thereby causing said apparatus and computers, 73 and 205, as described above in "PREPROGRAMMING RECEIVER STATION OPERATING SYSTEMS," to commence operating under control of the instructions of said operating systems.</p> <p>... particular information of said TELEPHON.EXE module that causes ... signal processor, 200, to transmit the information ... via telephone network in the fashion of example #10, to a computer at a particular remote data collection station.</p> <p>Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each farmer expects to harvest during the 2027 growing season. Automatically, the received data is aggregated, in a fashion well known in the art, at the computer of said <i>European master network</i> origination and control station ...</p> <p>Then, at 3:59 PM, on Thursday, February 18, 2027, the cycle of generating and communicating information of farmers is repeated ...</p>

communicating billing records, and	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	Page 28 lines 25-35.	<p>[Signal processor in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,....</p> <p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...</p> <p>Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information</p>
		that site can determine for billing purposes that the recipe was,	Page 44 lines 26-30.	
			Page 471 lines 26-31.	
			Page 473 lines 3-8.	
		first, ordered	Page 472 lines 23-27 with	

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a computer for using said at least one control signal and said computer programming, said method comprising the steps of:			and, second, delivered.	Page 471 lines 14-16. Page 473 line 29 to Page 474 line 1.	and TV567# information. Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ... Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
	Column 8 lines 20-27.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.		Page 33 lines 7-20.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has a capacity for controlling the operation of all elements of the signal processor ...
	Column 9 lines 21-23.	[The Controller, 20] is interactive with external sources via telephone connection, 22, and ...		Page 273 lines 6-19.	Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a particular instruct-to- receive signal. Said instruct-to-receive signal causes said first
transmitting from said at least one transmitter station to said at least one receiver station operating instructions associated with at least one of					

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	<p>... can be reprogrammed from such remote sources.</p>	<p>computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.</p> <p>At 3:10 AM, GMT, said <i>European master network station</i> transmits particular SPAM message information, embedded in the information of said master transmission, including a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain operating system instructions. In so doing, said <i>European master network station</i> inputs operating system instructions to all SPAM apparatus and receiver station computers, 73, and microcomputers, 205, thereby causing said apparatus and computers, 73 and 205, as described above in "PREPROGRAMMING RECEIVER STATION OPERATING SYSTEMS," to commence operating under control of the instructions of said operating systems.</p> <p>... particular information of said TELEPHON.EXE module that causes ... signal processor, 200, to transmit the information ... via telephone network in the fashion of example #10, to a computer at a particular remote data collection station.</p> <p>Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each farmer expects to harvest during the 2027 growing season. Automatically, the received data is aggregated, in a fashion well known in the art, at the computer of said <i>European master network</i> origination and control station ... Then, at 3:59 PM, on Thursday, February 18, 2027, the cycle of generating and communicating information of farmers is repeated ...</p>
		<p>Page 537 lines 6-17.</p> <p>with respect to page 555 line 24 to page 556 line 14.</p>

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said command and	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.	
said at least one control signal,	Column 20 lines 27-32.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, ...	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...	
said operating instructions being effective to program said at least one receiver station to respond	Column 9 line 23.	... and [the controller, 20] can be reprogrammed from such remote sources.	Page 537 lines 6-17.	At 3:10 AM, GMT, said <i>European master network station</i> transmits particular SPAM message information, embedded in the information of said master transmission, including a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain operating system instructions. In so doing, said <i>European master network station</i> inputs operating system instructions to all SPAM apparatus and receiver station	

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in a predetermined fashion to at least one of said command and said at least one control signal;				with respect to page 555 line 24 to page 556 line 14.	computers, 73, and microcomputers, 205, thereby causing said apparatus and computers, 73 and 205, as described above in "PREPROGRAMMING RECEIVER STATION OPERATING SYSTEMS," to commence operating under control of the instructions of said operating systems.
					... particular information of said TELEPHON.EXE module that causes ... signal processor, 200, to transmit the information ... via telephone network in the fashion of example #10, to a computer at a particular remote data collection station.
					Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each farmer expects to harvest during the 2027 growing season. Automatically, the received data is aggregated, in a fashion well known in the art, at the computer of said <i>European master network</i> origination and control station ... Then, at 3:59 PM, on Thursday, February 18, 2027, the cycle of generating and communicating information of farmers is repeated ...
		Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
inputting said command at said input device;		Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said

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inputting said at least one control signal from said at least one transmitter station at said at least one receiver station;	Column 20 lines 27-31.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 ...	TV567# information to the controller, 20, of the signal processor, 200, of said station.	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...
comparing	Column 20 lines 31.	This signal instructs buffer/comparator, 8, ...	Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, ...	Page 472 lines 13-15.	Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, ...
information designated by said command to	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
information designated by said at least one control signal;	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-	Page 472 lines 15-17.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-

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processing said computer programming and	...		memory ...	
	Column 8 lines 20-27.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.	Page 33 lines 7-20.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...
	Column 9 lines 65-68.	[Controller, 20] instructs processor or monitor, 12, how to identify what signals to pass externally and where to pass them and what signals to transfer to buffer/comparator, 14.	Page 149 lines 8-16.	Then said decrypt-a-00-header-message instructions cause controller, 20, to transmit to controller, 12, a particular <i>transfer-decrypted-message instruction</i> and particular decryption mark information of key J that identifies J as the decryption key. Receiving said instruction and information causes controller, 12, to execute particular preprogrammed <i>transfer- and-meter instructions</i> then record said mark of key J at particular decryption-mark-@12 register memory.
			Page 150 lines 7-9.	Under control of said <i>transfer-and-meter instructions</i> , controller, 12, commences receiving decrypted information of the second message from decryptor, 10.
			Page 150 lines 16-21.	Automatically controller, 12, processes said information of the second message of example #2 as a SPAM command. Receiving the header and execution segment causes controller, 12, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message accordingly.
			Page 152 line 18 to page 153 line 1.	Receiving said complete-transfer-phase instruction causes controller, 12, to cease transferring information, under control of said

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communicating computer output to a computer peripheral device in accordance with said operating instructions	Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.	Page 472 lines 23-27.	<p><i>transfer-and-meter instructions</i>, to deactivate all output ports, and to commence executing the meter instructions of said transfer-and-meter instructions. Said meter instructions cause controller, 12, to ... transfer to buffer/comparator, 14, particular header identification information that identifies controller, 12, as the source of said transfer the information recorded at said SPAM-meter memory then the information recorded at said decryption-mark- @12 register memory, which information is the decryption mark of key J. (Hereinafter, said meter information generated by the second combining synch command in example #2 is called the "2nd meter information (#2).")</p> <p>... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p>
based on said step of comparing;	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	<p>Page 473 line 29 to page 474 line 1.</p> <p>Page 472 lines 15-17.</p>	<p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p> <p>... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p>
outputting said computer output at said	Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the	Page 33 lines 18-20.	Controller, 20, has capacity for controlling the operation of all elements of the signal

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		first, ordered	Page 473 lines 3-8.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...
			Page 472 lines 23-27 with	Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
			Page 471 lines 14-16.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567# ...
		and, second, delivered.	Page 473 line 29 to Page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
198. A method for tracking results	Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.	Page 472 lines 23-27.	... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
			Page 473 line 29 to page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular

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of a comparison of control signals	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
	Column 20 lines 31.	This signal instructs buffer/comparator, 8, ...	Page 472 lines 13-15.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, ...
at a receiver station	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
in a communications network, said network	Column 20 lines 54-56.	... when signal processor, 200, transfers the data in its data recorder, 16, via	Page 396 lines 8-10.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
			Page 28 lines 25-35.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples. [Signal processor 200 in Fig.7] has capacity, at each station, for receiving monitor

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having			telephone to a remote site, ... See Fig. 1.		information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage. See Fig. 2.
at least one transmitter station and	Column 9 lines 21-22.	[The controller, 20] is interactive with external sources via telephone connection, 22, ...	Page 273 lines 6-19.		Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a particular instruct-to- receive signal. Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.
at least one receiver station, said at least one receiver station having	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described	Page 390 lines 30-35.		Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.

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at least one processor, at least one storage device, and	Column 20 lines 54-56.	here can permit. ... when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site, ...	Page 396 lines 8-10. Page 28 lines 25-35.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples. [Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.	
at least one input device adapted to receive user input, said method comprising the steps of:	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.	
receiving at said at least one input device at least one user input based on a request for user input;	Column 20 lines 19-26.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further ...	Page 471 lines 6-25.	Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F,	

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				<p>... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.</p> <p>Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.</p>
storing said at least one user input at said at least one storage device;	<p>Column 20 lines 26-27.</p> <p>Column 20 lines 23-26.</p>	<p>... to hold and process further in a predetermined fashion.</p> <p>The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...</p>	<p>Page 471 lines 22-25.</p> <p>Page 471 lines 14-21.</p>	<p>Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.</p> <p>Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.</p>
receiving at said at least one receiver station at least one information transmission from said at least one transmitter station, said at least one information transmission including processor instructions;	Column 9 lines 21-23.	[The Controller, 20] is interactive with external sources via telephone connection, 22, and ...	Page 273 lines 6-19.	<p>Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a</p>

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				<p>particular instruct-to- receive signal. Said instruct-to- receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.</p> <p>At 3:10 AM, GMT, said <i>European master network station</i> transmits particular SPAM message information, embedded in the information of said master transmission, including a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain operating system instructions. In so doing, said European master network station inputs operating system instructions to all SPAM apparatus and receiver station computers, 73, and microcomputers, 205, thereby causing said apparatus and computers, 73 and 205, as described above in "PREPROGRAMMING RECEIVER STATION OPERATING SYSTEMS," to commence operating under control of the instructions of said operating systems.</p> <p>... particular information of said TELEPHON.EXE module that causes ... signal processor, 200, to transmit the information ... via telephone network in the fashion of example #10, to a computer at a particular remote data collection station.</p> <p>Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each farmer expects to harvest during the 2027 growing season. Automatically, the received data is aggregated, in a fashion well known in the art, at the computer of said <i>European master network</i> origination and control station ...</p> <p>Then, at 3:59 PM, on Thursday, February 18, 2027, the cycle of generating and</p>
	... can be reprogrammed from such remote sources.		<p>Page 537 lines 6-17.</p> <p>with respect to page 555 line 24 to page 556 line 14.</p>	

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comparing information stored at said at least one processor with said stored at least one user input		Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...		communicating information of farmers is repeated ...
		Column 20 lines 31.	This signal instructs buffer/comparator, 8, ...	Page 472 lines 15-17.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
	based on said received at least one information transmission;	Column 8 lines 20-27.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.	Page 33 lines 7-20.	Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, ... Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has a capacity for controlling the operation of all elements of the signal processor ...
authorizing processing at said at least one receiver station of said processor instructions based on the result from said step of comparing;		Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
		Column 8 lines 20-27.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.	Page 33 lines 7-20.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has a capacity for controlling the operation of all elements of the signal processor ...

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recording a result of said step of comparing at said at least one storage device.	Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.	Page 472 lines 23-27.	... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
			Page 473 line 29 to page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.

199. The method of claim 198, wherein said step of authorizing processing of said processor instructions employs an instruct to decrypt signal.	Column 20 lines 37-42.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200,	Page 477 lines 8-23.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ...
		which, in a predetermined fashion, signal	Page 281 lines 1-6.	By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")
			Page 282 line 2 to	... the information of said segments is

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	processor, 200, decrypts and transfers	page 283 line 33.	<p>encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".</p>
	to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.	Page 478 lines 1-5.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)

200. A method of controlling	Column 19 lines 60-63.	Page 59 lines 29-33.	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p>
		Page 25 line 34 to page 26 line 1.	<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p>
			The second message is of the information

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at least one of		Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	<p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 390 lines 30-35.</p>	<p>associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.</p> <p>Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.</p>
a plurality of receiver stations each of which includes		Column 3 lines 48-51.	Another method has application at receiver sites such as private homes or public places like theaters, hotels, brokerage offices, etc., whether commercial establishments or not.	<p>Page 396 lines 8-10.</p> <p>Page 12 lines 30-35.</p>	<p>It is the further purpose of this invention to provide means and methods for the automation of ultimate receiver stations, ... Such ultimate receiver stations may be private homes or offices or commercial establishments such as theaters, hotels, or brokerage offices.</p>
a television receiver,		Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	<p>Page 445 line 24 to page 446 line 1.</p>	<p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p>

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a control signal detector, a processor, and with each said receiver station adapted to detect a presence of at least one control signal and being programmed to process	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 26 lines 1-2. Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 34 line 35 to page 35 line 1. Page 445 line 24 to page 446 line 1.	This base band signal is then transferred through separate paths to three separate detector devices. ... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
			Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...

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downloadable code, said method comprising the steps of:	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	<p>Page 23 line 35 to page 24 line 16.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a</p>

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(1) receiving said	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	Page 59 lines 29-33.	particular combining.) A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. At this point, an instruction signal is generated at said program originating studio, ... The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.
downloadable	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 25 lines 34-35. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
code which is	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ...
effective at said at least one receiver station to control a receiver station apparatus and to	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.	Page 435 lines 16-18. Page 267 lines 20-28 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205.

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communicate at least one of a code and a datum to serve as one of	Column 7 lines 50-60.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be	Page 31 lines 10-22.	<p>Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ...</p> <p>Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)</p> <p>Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter</p>

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evidence of	Column 7 lines 65-67.	processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 31 line 30 to page 32 line 6.	and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14. Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...
the passing of a signal to a controllable device and the	Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Buffer/comparator, 8, passes signals that do not require decryption directly to processor or controller, 12.	Page 30 lines 29-30.	
	Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.	Page 31 lines 14-18.	
functioning of said controllable device in response to said signal, and	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions	Page 435 lines 16-18. Page 267 lines 20-28 from example #5.	

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delivering said downloadable code to a transmitter;	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	<p>Page 268 line 28 to page 269 line 12 from example #5.</p> <p>Page 59 lines 29-33.</p> <p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the</p>	<p>described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ...</p> <p>Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of a available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00"</p>

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	Column 4 lines 5-6. Column 19 lines 14-15.	These techniques employ signals embedded in programs. ... pass all program and channel identifiers on all programming being cablecast on the multi-channel system.	instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 13 lines 25-26. Page 435 lines 16-18. Page 248 lines 22-26 from example #5. Page 250 lines 13-16 from example #5. Page 252 lines 15-35 from example #5.	header, an execution segment, and a meter-monitor ... The present invention employs signals embedded in programming. In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C ... Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2. Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ... Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter-monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment segment)

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					<p>then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p>
(2) receiving at least one control signal which		Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	<p>Page 267 lines 20-28 from example #5.</p> <p>Page 59 lines 29-33.</p> <p>Page 25 lines 34-35.</p> <p>Page 90 lines 4-7.</p>	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, ...</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.</p>

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operates at said at least one receiver station to execute	Column 19 lines 63-66.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,	20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 26 lines 1-8.
a portion of said downloadable code at said processor; and	Column 19 lines 45-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 37 line 26 to page 38 line 8. Page 451 lines 6-7. Page 23 line 35 to page 24 line 4.
		Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ... When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ... Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as	

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			the first series. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."
	These signals instruct microcomputer, 205,	Page 37 line 26 to page 38 line 8. Page 24 lines 5-16.	...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
	to generate several graphic video overlays,	Page 451 lines 7-11.	Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and
	which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to	Page 19 line 29 to page 20 line 20.	

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					<p>for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchronizing command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchronizing command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p>
		transmit these overlays to TV set, 202,		Page 26 lines 4-8.	
		upon command.		Page 44 lines 14-17.	
				Page 26 lines 20-28.	
(3) causing said at least one control signal to be communicated to said transmitter at a specific time, thereby to transmit an information transmission comprising said			At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	

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downloadable code and said at least one control signal.			<p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p>	
201. The method of claim 200, wherein a television program is displayed at said at least one receiver station and	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	<p>Page 445 line 24 to page 446 line 1.</p> <p>Page 446 lines 17-21.</p> <p>Page 449 lines 13-26.</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p> <p>In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...</p> <p>Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the</p>	

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<p>said downloadable code programs said processor to output</p>	<p>Column 19 lines 45-53.</p>	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p> <p>These signals instruct microcomputer, 205,</p>	<p>Page 451 lines 6-7.</p> <p>Page 23 line 35 to page 24 line 4.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 24 lines 5-16.</p>	<p>particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at</p>
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				<p>RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."</p> <p>...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating a computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p>
	to generate several graphic video overlays,		Page 451 lines 7-11.	
	which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to		Page 19 line 29 to page 20 line 20.	
	transmit these overlays to TV set, 202,		Page 26 lines 4-8.	
	upon command.		Page 44 lines 14-17.	

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video in said television program.	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
			Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
			Page 451 line 3.	And the Fig. 1C combining is displayed.

202. The method of claim 200, wherein said information transmission is transmitted to at least	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.

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two of said plurality of receiver stations at the same time and	Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. FIGS. 3A, 3B, and 3C illustrate the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of the page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.
	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 324 lines 18-21. Page 390 lines 30-35.
	Column 11 lines 38-46.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video	Page 327 line 35 to page 328 line 13.
each of said at least		<p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.</p> <p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.</p> <p>Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor</p>	

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two receiver stations responds to said control signal.			information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	
			SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....	Page 84 lines 26-28.
			... monitor information that identifies what programming is available, ...	Page 28 lines 26-27.
			Meter-monitor segments contain meter information and/or monitor information.	Page 49 lines 26-27.
			Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...	Page 328 lines 14-16.
			In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...	Page 435 lines 16-18.
	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)	Page 267 lines 20-28 from example #5.

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
	<p>Column 19 lines 27-29.</p> <p>...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p>		<p>Page 436 line 9 to page 437 line 3.</p> <p>Page 439 lines 14-15.</p> <p>Page 445 line 24 to page 446 line 1.</p>	<p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p> <p>... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
			Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
203. The method of claim 200, wherein said information transmission is transmitted to at least	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33. Page 25 line 34 to page 26 line 1. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 324 lines 18-21. Page 390 lines 30-35.	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.</p> <p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber</p>
two of said plurality of receiver stations at	Column 10 lines 24-28. Column 17 lines 47-53.	<p>FIGS. 3A, 3B and 3C illustrates one instance of such use. FIGS. 3A, 3B, and 3C illustrate the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.</p> <p>FIG 6 illustrates one possible configuration of equipment in a home or</p>		

Claim Language	Support to parent application filed November 3, 1981	Reference	Language	Support to instant specification	Reference	Language
different times and each of said at least two receiver stations	Column 10 lines 61-64.	office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit. Incoming programing transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.		station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons. Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.	Page 396 lines 8-10.	
	Column 12 lines 45-46.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programing ...		The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...	Page 337 lines 3-10.	
receives and responds to said at least one control signal	Column 10 lines 61-64.	Incoming programing transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.		The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by	Page 324 lines 23-33.	

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	Column 11 lines 57-64.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...	Page 329 line 2-20.	other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire... Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
asynchronously.	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 435 lines 16-18. Page 267 lines 20-28 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions

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			<p>described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p>
			<p>Page 436 line 9 to page 437 line 3.</p>
			<p>Page 439 lines 14-15.</p>

204. The method of claim 200, wherein said at least one control signal incorporates	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
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Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
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said downloadable code.	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	<p>Page 23 line 35 to page 24 line 16.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
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				particular combining.)
205. The method of claim 200, further comprising the steps of receiving said downloadable code at a receiver in said transmitter station,	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
communicating said downloadable code from said receiver to a memory location, and	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
	Column 11 lines 1-3.	The other path flows from each distribution amplifier, 63 through 70, individually to signal processor, 71.	Page 325 lines 24-27.	The other path inputs the transmission of said given receiver/demodulator/ input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, individually to signal processor system, 71.
	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion ...	Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.
			Page 36 line 32 to page 37 line 3.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs
storing said downloadable code at	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
said memory location for a period of time			instruction and information signals from their associated programming and ...		transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....
	Column 7 lines 36-37.		Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion ...	Page 59 lines 29-33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 12 lines 45-46.		Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming ...	Page 30 lines 7-9. Page 36 line 32 to page 37 line 3. Page 337 lines 3-10.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion. Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs In field distribution system, 93, amplifier, 94, inputs ... all programming transmitted by the cable television system head end station...
206. The method of claim 200, wherein at least one of said plurality of receiver stations is adapted to detect the presence of	Column 19 lines 63-64.		This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2. Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43,

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
	Reference	Language	Reference	Language
said at least one control signal and	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
programmed to respond to said downloadable code on the basis of	Column 19 lines 42-44.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 20-24.	This base band signal is then transferred through separate paths to three separate detector devices.
a pattern of signal composition, said method further comprising the step of	Column 4 lines 36-40.	In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.	Page 13 lines 19-24.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
composing at least one of said at least one control signal and said downloadable code in said pattern.	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	Page 59 lines 29-33.	They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.
			Page 25 lines 34-35.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			Page 90 lines 4-7.	At this point, an instruction signal is generated at said program originating studio, ...
				The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
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			20-28, page 89 lines 3-6, and page 90 lines 4-11.	
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207. The method of claim 200, wherein at least one of said plurality of receiver stations is adapted to detect the presence of said at least one control signal and	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2. Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
programmed to respond to said downloadable code on the basis of the	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
location of a signal in said information transmission, said method further comprising the step of	Column 19 lines 42-44.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 20-24.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
	Column 4 lines 36-40.	In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.	Page 13 lines 19-24.	They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.
causing at least one of said at least one control signal and said downloadable code to be transmitted in said	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
location.					consists of a series or stream of sequentially transmitted SPAM messages.
				<p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p>	<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p>
208. The method of claim 200, wherein at least one of said plurality of receiver stations is adapted to detect the presence of said at least one control signal and	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.		<p>Page 26 lines 1-2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.		<p>Page 34 line 35 to page 35 line 1.</p>	<p>This base band signal is then transferred through separate paths to three separate detector devices.</p>
programmed to respond to said downloadable code on the basis of	Column 19 lines 42-44.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.		<p>Page 21 lines 20-24.</p>	<p>Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.</p>

Claim Language	Support to parent application filed November 2, 1981.	Support to instant specification.
Reference	Language	Reference
Language	Language	Language

a timing pattern of signal transmission, said method further comprising the step of	Column 4 lines 36-40.	In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.	Page 13 lines 19-24.	They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.
causing at least one of said at least one control signal and said downloadable code to be transmitted in accordance with said timing pattern.	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
			Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...

209. The method of claim 200, wherein at least one of said downloadable code and	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
identification data in respect of said downloadable code is	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all	Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...

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	Reference	Language	Reference	Language
		signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	<p>Page 267 lines 20-28 from example #5.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p>

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Claim Language	Reference	Language	Reference
embedded in one of a television signal and	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 439 lines 14-15.
a signal containing a television program.	Column 4 lines 22-25.	In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear.	Page 13 lines 25-26.
	Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.	Page 14 lines 11-14.
	Column 19 lines 20-25.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	Page 420 lines 21-29.
		... to receive the transmission of cable channel 13; ... The present invention employs signals embedded in programming. In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear. Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions. The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200. Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said	Page 436 line 9 to page 437 line 6.

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			<p>program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p>
		Page 439 lines 9-15.	
		Page 295 lines 6-8.	
		Page 439 lines 9-15.	

210. A method of processing signals at	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions</p>
			Page 435 lines 16-18.
			Page 267 lines 20-28 from example #5.

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			described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
			In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of a available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)
a receiver station, said receiver station having	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 268 line 28 to page 269 line 12 from example #5.
			Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
			Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
a computer to deliver at a television monitor one image of television	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its

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programming based on programming delivered at said receiver station at different times, said method comprising the steps of:			instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
	Column 19 lines 31-34.		FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Page 451 line 3. Page 18 lines 24-27.	And the Fig. 1C combining is displayed. Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.
				page 450 line 27 to page 451 line 11.	(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.) Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed. But the combining of Fig. 1C is just part of a larger process. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C

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storing user data of interest;	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.		is merely the first.
			Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
			Page 44 lines 14-17. Page 26 lines 20-28.	<p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing</p>

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receiving television programming from a television programming source;	Column 6 lines 30-41.	The cable transmission is input simultaneously to switch 1 and mixer 2. The broadcast transmission is input to switch 1. Switch 1 and mixers 2 and 3 are all controlled by local oscillator and switch control 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer 3 which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.	Page 29 lines 15-26.	loading and running information for a particular combining.) The cable transmission is inputted simultaneously to switch, 1, and mixer, 2. The broadcast transmission is inputted to switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.
receiving an information transmission including	Column 6 lines 30-41.	The cable transmission is input simultaneously to switch 1 and mixer 2. The broadcast transmission is input to switch 1. Switch 1 and mixers 2 and 3 are all controlled by local oscillator and switch control 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer 3 which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.	Page 29 lines 15-26.	The cable transmission is inputted simultaneously to switch, 1, and mixer, 2. The broadcast transmission is inputted to switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.
at least one instruct signal which is effective to control at least one controllable device at said receiver station, and receiving at least one of	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.	Page 435 lines 16-18. Page 267 lines 20-28 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5)

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a code and	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	Page 268 line 28 to page 269 line 12 from example #5.	<p>signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)</p> <p>(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...</p>	<p>The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded</p>
	Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits	Page 14 line 32 to page 15 line 2.		

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serve as evidence of at least one of the	Column 7 lines 65-67.	encoded together on a single line of video or sequentially in audio. Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 31 line 30 to page 32 line 6.	together on a single line of video or sequentially in audio. Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...		
passing of said at least one instruct signal to said at least one controllable device, and the	Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.		
functioning of said at least one controllable device in response to said at least one instruct signal;	Column 7 lines 50-54.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.	Page 31 lines 10-14.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both.		
	Column 7 lines 59-60.	If [a signal or signals] are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 31 lines 18-22.	If [a signal or signals] contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.		
detecting said at least one instruct signal in said information transmission;	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.		
	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all	Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...		

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		signals that it passes to buffer/ comparator, 14.	<p>Page 267 lines 20-28 from example #5.</p> <p>Page 268 line 28 to page 269 line 12 from example #5.</p>	<p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)</p>
controlling said computer based on said detected at least one instruct signal, said step of controlling comprising:	Column 19 lines 20-29.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 436 line 9 to page 437 line 6.	<p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW</p>

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		<p>information and said ... enable-WSW-on-CC13 ...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...</p> <p>...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217, ...</p> <p>...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall</p>
<p>Then, in a predetermined fashion, microcomputer, 205, may</p>	<p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p>	<p>instruct tuner, 214, to switch box, 201, to channel X</p> <p>and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week,"</p>

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			and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on	Page 445 line 24 to page 446 line 1.	Street Week" program. ...instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M,and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
			and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1. Page 446 lines 17-21.	
(1) selecting and communicating a first portion of said image to said television monitor;	Column 19 lines 20-29.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.		Page 436 line 9 to page 437 line 6.	Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes
		Then, in a predetermined fashion,			

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		microcomputer, 205, may		microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatusto cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
		instruct tuner, 214, to switch box, 201, to channel X	Page 439 lines 9-15.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...
		and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week,"	Page 295 lines 6-8.	...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217, ...
		and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on	Page 445 lines 24-27.	...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
		and tuner, 215, to tune appropriately to "Wall Street Week."	Page 446 lines 18-23.	...instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M,and to tune monitor, 202M, in a predetermined fashion.
			Page 445 line 24 to page 446 line 1.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said
			Page 446 lines 17-21.	

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	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	information, and to emit sound in accordance with said audio ... During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
(2) communicating a second portion of said image to said television monitor	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 26 lines 4-11.	... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
based on said stored user data of interest; and subsequently	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 451 line 3. Page 23 line 35 to page 24 line 16.	And the Fig. 1C combining is displayed. Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")

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		generate several graphic video overlays, ... and to transmit these overlays to TV set, 202, upon command.	Page 451 lines 7-11. Page 26 lines 4-8. Page 44 lines 14-17. Page 26 lines 20-28.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first. Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...
(3) ceasing to display said image at said television monitor;	Column 20 lines 2-7.	When the two studio generated graphics are no longer displayed, the studio stops sending the instruction signal, and the microcomputer, 205, ceases transmitting its own graphic to TV set, 202, and prepares to send the next locally generated graphic overlay upon instruction from the originating studio.	Page 26 line 33 to page 27 line 9.	As the program proceeds, in the same fashion a further instruction signal is generated at said studio; transmitted; detected; inputted from decoder, 203, to microcomputer, 205; and executed as "GRAPHICS OFF." Then said studio ceases transmitting the graphic image, and transmits another image such as the host's talking head. Simultaneously, the GRAPHICS OFF command causes microcomputer, 205, to cease overlaying the graphic information onto the received composite video and to commence transmitting the received composite video

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			<p>transmission unmodified. Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions.</p> <p>Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synch commands.</p>	
delivering said image at said television monitor in the period of time between	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	<p>Page 451 line 22 to page 452 line 5.</p> <p>Page 451 line 3.</p> <p>Page 26 lines 8-11.</p>	<p>And the Fig. 1C combining is displayed.</p> <p>TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p>
said step of	Column 19 line 64 to	This signal instructs microcomputer, 205,	Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at

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communicating and	column 20 line 1.	to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...	
said step of ceasing to display,	Column 20 lines 2-3.	When the two studio generated graphics are no longer displayed, ...		Then said studio ceases transmitting the graphic image, and transmits another image such as the host's talking head.	
said image based on programming received at said receiver station at different times; and	Column 20 lines 3-4.	... the studio stops sending the instruction signal, and the ...		As the program proceeds, in the same fashion a further instruction signal is generated at said studio; transmitted; detected; inputted from decoder, 203, to microcomputer, 205; and executed as "GRAPHICS OFF."	
performing at least one of:	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14.		In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...	
(1) storing said at least one of a code and a datum at said receiver station; and				All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)	
				In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message	

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		Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 31 line 30 to page 32 line 6.	causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)
(2) communicating said at least one of a code and a datum from said receiver station to at least one remote data collection station.	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...	Page 435 lines 16-18. Page 267 lines 20-28 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands

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			<p>are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)</p>	<p>Page 268 line 28 to page 269 line 12 from example #5.</p>	<p>Page 268 line 28 to page 269 line 12 from example #5.</p>	<p>are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)</p>
Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.		<p>Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...</p>	<p>Page 31 line 30 to page 32 line 6.</p>	<p>Page 31 line 30 to page 32 line 6.</p>	<p>Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...</p>
Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.		<p>Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor</p>	<p>Page 31 line 30 to page 32 line 1.</p>	<p>Page 31 line 30 to page 32 line 1.</p>	<p>Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor</p>

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	Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.	<p>Page 33 lines 18-20.</p> <p>Page 273 lines 4-6.</p> <p>Page 273 lines 21-25.</p>	<p>records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...</p> <p>Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...</p> <p>The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.</p> <p>... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.</p>
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211. The method of claim 210, further comprising the step of generating said user data of interest in response to said detected at least one instruct signal.	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	<p>Page 26 lines 4-11.</p> <p>Page 451 line 3.</p>	<p>... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p>
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212. The method of claim 210, further comprising any one of the steps of:	Column 18 lines 45-47.	In this example, microprocessor, 205, is programmed to hold a portfolio of stocks ...	Page 420 lines 3-4.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks ...
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programming said receiver station to process subscriber data of interest and to respond to at least one instruct signal associated with said television programming;	Column 19 lines 42-53.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	Page 450 lines 31-32. Page 21 lines 20-24.	... caused his microcomputer, 205, to be preprogrammed as described above; ... Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
		When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 451 lines 6-7. Page 23 line 35 to page 24 line 4.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ... Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		These signals instruct microcomputer, 205,	Page 24 lines 5-16.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to load

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			<p>at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating a computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p>
	to generate several graphic video overlays,	Page 451 lines 7-11.	
	which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to	Page 19 line 29 to page 20 line 20.	
	transmit these overlays to TV set, 202,	Page 26 lines 4-8.	

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		upon command.	Page 44 lines 14-17. Page 26 lines 20-28.	<p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a ...</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p>
receiving	Column 19 lines 63-66.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,	Page 26 lines 1-8. Page 37 line 26 to page 38 line 8.	<p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber</p>

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a command	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 23 line 35 to page 24 line 16.	station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...
		generate several graphic video overlays, ...	Page 451 lines 7-11.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
		and to transmit these overlays to TV set, 202,	Page 26 lines 4-8.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
		upon command.	Page 44 lines 14-17.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
			Page 26 lines 20-28.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.

(Hereinafter, an instruction such as the

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embedded in or associated with	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programing transmission.	Page 21 lines 23-24.	above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...
	Column 19 lines 15-18.	Signal processor, 200, receives this instruction from microcomputer, 205, at its processor or monitor, 12, which reacts, ...	Page 288 lines 16-20.	... instruction signals embedded in the "Wall Street Week" programming transmission. ... microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.
a signal that contains said television programming;	Column 19 lines 60-65.	At this point, an instruction signal is generated in the television studio originating the programing and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, ...	Page 25 line 33 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ...

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			Page 446 lines 18-23. Page 445 line 24 to page 446 line 1. Page 445 line 35 to page 446 line 1. Page 446 lines 17-21.	... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program. ... instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
(2) a fashion in which to present at least one of said television programming and computer output; and	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to generate several graphic video overlays, ...	Page 23 line 35 to page 24 line 16. Page 451 lines 7-11.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.") ... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining

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		and to transmit these overlays to TV set, 202, upon command.	Page 26 lines 4-8. Page 44 lines 14-17. Page 26 lines 20-28.
			of Fig. 1C is merely the first. Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...
(3) a time in which to display said at least one of said television programming and computer output;	Column 19 lines 20-29.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares

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		Then, in a predetermined fashion, microcomputer, 205, may		said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatusto cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
		instruct tuner, 214, to switch box, 201, to channel X	Page 439 lines 9-15.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its ...
		and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week,"	Page 445 lines 24-27.	...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217, ...
		and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on	Page 446 lines 18-23.	...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
		and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	...instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...
			Page 445 line 35 to page 446 line 1.	...and to tune monitor, 202M, in a predetermined fashion.

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			Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
controlling said computer to process	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
a subscriber reaction to at least one of said television programming and	Column 20 lines 19-26.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further ...	Page 471 lines 6-25.	Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station. Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.
an image displayed at said television monitor, said step of controlling comprising the steps of:	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer

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(1) assembling a record that includes data in addition to said subscriber reaction; and	Column 20 lines 42-45.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer ...	Page 472 lines 23-27.	generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
	Column 9 line 68 to column 10 line 2.	The controller, 20, instructs buffer/comparator, 14, what signals to discard and how to mark signals and assemble signal strings.	Page 32 lines 20-21. Page 223 lines 22-33.	... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information. Buffer/comparator, 14, operates under control of controller, 20, ... Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter & monitor information (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing information from clock, 18.
			Page 224 lines 12-18.	When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion then discard all information of said record from its memory and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion.

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(2) transmitting said record to a remote data collection station;		Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	Page 28 lines 25-35.	[Signal processor in Fig.7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
			that site can determine for billing purposes that the recipe was,	Page 44 lines 26-30.	... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...
				Page 471 lines 26-31.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,....
				Page 473 lines 3-8.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...
			first, ordered	Page 472 lines 23-27 with	Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.

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	and, second, delivered.	Page 471 lines 14-16. Page 473 line 29 to Page 474 line 1.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567# ... Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
Column 9 lines 8-13.	Digital recorder, 16, can tell the controller, 20, when it reaches predetermined levels of fullness to permit the controller, 20, to instruct auto dialer, 24, to contact an appropriate remote site allowing the recorder, 16, to output its data making memory available.	Page 33 lines 4-6. Page 272 line 26 to page 273 line 8.	Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness. In each example, ... recorder, 16, measures the quantity of its recording capacity that holds signal records, in a predetermined fashion, and determines that said quantity is equal to or greater than said particular fullness information. Said determining causes recorder, 16, to transfer a particular instruct-to- call instruction to controller, 20, that causes controller, 20, to activate telephone connection, 22, and proceed with a particular preprogrammed telephone signal record transfer sequence that is fully automatic. The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number.
		Page 275 line 33 to page 276 line 2.	Automatically said second computer responds with a particular transmission complete signal

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controlling said computer to process said subscriber reaction to at least one of said television programming and		Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	that causes controller, 20, to terminate said telephone call then to cause recorder, 16, to erase from memory all said meter charge information.
		Column 20 lines 19-26.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further ...	Page 471 lines 6-25.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ... Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station. Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.
said image displayed at said television monitor, said step of controlling comprising the steps of:		Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.

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		Reference	Language	Reference	Language
(1) detecting a datum that identifies at least one of said television programming and		Column 18 lines 30-35.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...	Page 408 lines 18-29	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion.
				Page 414 lines 13-27	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.
				Page 15 lines 16-22	The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.
				Page 411 lines 10-15	Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent
				Page 418 line 23 to page 419 line 15.	

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		Reference	Language	Reference	Language
said image displayed at said television monitor; and		Column 16 lines 18-21.	TV signal decoder, 145, for TV set, 144 (which may receive programming inputs and associated signals generated or transferred by microcomputer, 142).	Page 322 line 26 – Page 323 line 11.	instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission. The programming of said "Wall Street Week" program is received at tuner, 215, and displayed at monitor, 202M. Accordingly, transmitting said messages will also cause the decoder associated with tuner, 215-- decoder, 282--to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is identical to said 1st monitor information (#3) and 2nd monitor information (#3) except that the source mark information identifies decoder, 282, rather than decoder, 203. Likewise, unless the Fig. 1B information overlaid at microcomputer, 205, covers and obliterates the embedded information of said messages that is inputted from divider, 4, to microcomputer, 205, and would otherwise be transmitted to monitor, 202M, in the combined programming outputted by microcomputer, 205, (which covering and obliterating does not occur in example #3), transmitting said messages will also cause the decoder, 145, to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is also identical to said 1st and 2nd monitor information (#3) except that the source mark information identifies decoder, 145.
	(2) transmitting said datum to said remote data collection station;	Column 18 lines 36-37.	... for recording and subsequent transmission to a remote data collection site.	Page 411 line 28 to page 412 line 2.	In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and

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		<p>Page 419 lines 4-15.</p> <p>Page 28 lines 25-35.</p>	<p>may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p>
controlling said computer to process	Column 20 lines 31-33.	<p>... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...</p>	<p>... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p>
said subscriber reaction to at least one of said television programming and	Column 20 lines 19-26.	<p>Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to</p>	<p>Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
<p>said image displayed at said television monitor, said step of controlling comprising the steps of:</p>			the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further ...		that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station. Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.
	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
(1) storing a datum that identifies at least one of said television programming and	Column 18 lines 30-37.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,		Page 408 lines 18-29 Page 414 lines 13-27	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion. Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...

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		<p>Page 15 lines 16-22</p> <p>Page 36 lines 32-33.</p> <p>Page 38 lines 11-14.</p> <p>Page 411 lines 10-15</p> <p>Page 418 line 23 to page 419 line 15.</p> <p>Page 411 line 28 to</p>	<p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>In the fashion of example #3 above, receiving</p>
	<p>The processors, 204 and 210, transfer this information to signal processor, 200,</p> <p>for recording and subsequent transmission</p>		

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	to a remote data collection site.	<p>page 412 line 2.</p> <p>said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It</p>
		<p>Page 173 line 30 to page 174 line 23 from example #3.</p>
		<p>Page 419 lines 4-15.</p>
		<p>Page 28 lines 25-35.</p>

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said image displayed at said television monitor; and	Column 16 lines 18-21.	TV signal decoder, 145, for TV set, 144 (which may receive programming inputs and associated signals generated or transferred by microcomputer, 142).	Page 322 line 26 – Page 323 line 11.	<p>has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>The programming of said "Wall Street Week" program is received at tuner, 215, and displayed at monitor, 202M. Accordingly, transmitting said messages will also cause the decoder associated with tuner, 215-- decoder, 282--to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is identical to said 1st monitor information (#3) and 2nd monitor information (#3) except that the source mark information identifies decoder, 282, rather than decoder, 203. Likewise, unless the Fig. 1B information overlaid at microcomputer, 205, covers and obliterates the embedded information of said messages that is inputted from divider, 4, to microcomputer, 205, and would otherwise be transmitted to monitor, 202M, in the combined programming outputted by microcomputer, 205, (which covering and obliterating does not occur in example #3), transmitting said messages will also cause the decoder, 145, to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is also identical to said 1st and 2nd monitor information (#3) except that the source mark information identifies decoder, 145.</p>
(2) passing data regarding at least one of the availability, use and usage of at least one of said television programming and	Column 18 lines 30-37.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,	Page 408 lines 18-29	<p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above</p>

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			described fashion.	
			<p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p> <p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent</p>	
			<p>Page 414 lines 13-27</p>	
			<p>Page 15 lines 16-22</p>	
			<p>Page 36 lines 32-33.</p>	
			<p>Page 38 lines 11-14.</p>	
			<p>Page 411 lines 10-15</p>	
			<p>Page 418 line 23 to page 419 line 15.</p>	
			<p>The processors, 204 and 210, transfer this information to signal processor, 200,</p>	

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				<p>instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the</p>
	for recording and subsequent transmission to a remote data collection site.		<p>Page 411 line 28 to page 412 line 2.</p> <p>Page 173 line 30 to page 174 line 23 from example #3.</p> <p>Page 419 lines 4-15.</p>	

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said image to said computer that controls at least one of the selection and communication of program materials for display at said receiver station; and	Column 16 lines 18-21.	TV signal decoder, 145, for TV set, 144 (which may receive programming inputs and associated signals generated or transferred by microcomputer, 142).	Page 28 lines 25-35.	audio program unit of said radio transmission. [Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
			Page 322 line 26 - Page 323 line 11.	The programming of said "Wall Street Week" program is received at tuner, 215, and displayed at monitor, 202M. Accordingly, transmitting said messages will also cause the decoder associated with tuner, 215-- decoder, 282--to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is identical to said 1st monitor information (#3) and 2nd monitor information (#3) except that the source mark information identifies decoder, 282, rather than decoder, 203. Likewise, unless the Fig. 1B information overlaid at microcomputer, 205, covers and obliterates the embedded information of said messages that is inputted from divider, 4, to microcomputer, 205, and would otherwise be transmitted to monitor, 202M, in the combined programming outputted by microcomputer, 205, (which covering and obliterating does not occur in example #3), transmitting said messages will also cause the decoder, 145, to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is also identical to said 1st and 2nd monitor information (#3) except that the source mark information identifies decoder, 145.

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controlling said computer to process said subscriber reaction to at least one of said television programming and	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...	
	Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 25 line 34 to page 26 line 2. Page 37 line 26 to page 38 line 8. Page 26 lines 4-11.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ... Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	

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(2) outputting said communicated unit of programming at an output device of said receiver station.	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 477 lines 8-17.	<p>information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p>
			Page 473 lines 3-13.	<p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe... instructions ...</p>
			Page 477 lines 12-17.	<p>... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....</p>
			Page 477 lines 23-29.	<p>... causes ... said decoder, 290, to detect and process properly the information of said second message.</p>
			Page 478 lines 1-5.	<p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p>
			Page 475 lines 1-2.	<p>Receiving said output information causes</p>

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				printer, 221, to print the information of said specific recipe and list.
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213. A method of controlling at least one of a plurality of receiver	Column 10 lines 15-20.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	Page 324 lines 8-17.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.
	Column 8 lines 58-59.	Control signals can be passed to the apparatus by means of the programming transmissions ...	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system of Fig. 6; the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
	Column 3 lines 48-51.	Another method has application at receiver	Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
			Page 12 lines 30-35.	It is the further purpose of this invention to

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stations each of which includes			sites such as private homes or public places like theaters, hotels, brokerage offices, etc., whether commercial establishments or not.		provide means and methods for the automation of ultimate receiver stations, ... Such ultimate receiver stations may be private homes or offices or commercial establishments such as theaters, hotels, or brokerage offices.
a mass medium program receiver,	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.		Page 470 lines 1-3 and Page 470 lines 9-12.	...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...
a signal detector,	Column 20 lines 27-29. Column 6 lines 48-50.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ... This base band signal is then transmitted through separate paths to three separate detector devices.		Page 470 lines 19-21. Page 471 line 35 to page 472 line 1. Page 34 line 35 to page 35 line 1. Page 472 lines 4-12. Page 37 line 26 to page 38 line 8.	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M. At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ... This base band signal is then transferred through separate paths to three separate detector devices. ... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber
at least one computer or processor, and with each of said receiver stations adapted to detect the presence of at least one control signal and	Column 20 lines 29-30.	... which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.			

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to input a first subscriber reaction to an offer communicated in a mass medium program, said method comprising the steps of:	Column 8 lines 20-27.	<p>The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.</p> <p>Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further ...</p>	<p>Page 33 lines 7-20.</p> <p>Page 471 lines 6-25.</p>	<p>station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has a capacity for controlling the operation of all elements of the signal processor ...</p> <p>Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.</p> <p>Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.</p>
receiving at least one instruct signal at a	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points,	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a

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transmitter station and delivering said instruct signal to a transmitter, said instruct signal being effective at at			antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.		satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
	Column 4 lines 5-6.	These techniques employ signals embedded in programs.		Page 13 lines 25-26.	The present invention employs signals embedded in programming.
	Column 20 lines 27-33.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, ...		Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory and to cause ...
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable		Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said

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least one of said plurality of receiver stations,			message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
based on a condition,	Column 20 lines 23-26.	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
to control at least one controllable device and	Column 20 lines 31-37.	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...

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			<p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p> <p>... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...</p>	
			<p>476 line 34 to page 477 line 8.</p> <p>Page 477 lines 8-17.</p> <p>Page 474 lines 3-7.</p>	

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to assemble a record containing at least one	Column 9 line 68 to column 10 line 2.	Page 32 lines 20-21. Page 223 lines 22-33.	Buffer/comparator, 14, operates under control of controller, 20, ... Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter & monitor information from (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing information from clock, 18.
		Page 224 lines 12-18.	When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion then discard all information of said record from its memory and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion.
	Column 20 lines 49-54.	Page 473 line 29 to page 474 line 1	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
			The controller, 20, instructs buffer/comparator, 14, what signals to discard and how to mark signals and assemble signal strings.
			Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received.

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of a first code and datum				Page 314 line 30-33.	At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.
	Column 15 lines 57-60.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programing or data unit received and the source of each.		Page 315 lines 20-24.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
				Page 44 lines 26-32.	Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.
				Page 49 line 26 to page 50 line 20.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and ... unique codes that identify the sources and suppliers of computer data.
				Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
	Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.		Page 472 lines 23-27.	...Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.

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<p>to serve as evidence of at least one of: (a) the passing of said at least one instruct signal to said at least one controllable device, and</p>	<p>Column 20 lines 27-33.</p>	<p>Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, ...</p>	<p>Page 473 line 29 to page 474 line 1.</p>	<p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information- and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for- entered-information- and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause ...</p>	
	<p>Column 20 lines 45-46.</p>	<p>... and all necessary equipment was enabled.</p>	<p>Page 473 line 29 to page 474 line 1.</p>	<p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p>	

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receiving said at least one of a second code and	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
datum at said transmitter station, said at least one of a code and a datum	Column 2 lines 63-66. Column 3 lines 6-8.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ... Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 lines 27-29. Page 14 line 35 to page 15 line 2.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ... Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
designating at least one of said at least one instruct signal and	Column 20 lines 27-31.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 ...	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller,

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said condition;	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...
receiving said at least one control signal at said transmitter station, said at least one control signal operating at said at least one of said plurality of receiver stations to	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire... The present invention employs signals embedded in programming. Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be
	Column 4 lines 5-6. Column 20 lines 27-31.	These techniques employ signals embedded in programs. Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 ...	Page 13 lines 25-26. Page 471 line 26 to page 472 line 17.	

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execute said at least one instruct signal based on a second subscriber reaction;	<i>In General</i> Column 17 lines 39- 44.	Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed , and transfer such signals to such equipment as directed .	<i>In General</i> Page 15 lines 16-23.	transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
	<i>Specifically</i> Column 20 lines 29-30.	... which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.	... identifies the particular apparatus to which said signals are addressed , and outputs said signals to said apparatus ... A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ... Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205. ... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of	... identifies the particular apparatus to which said signals are addressed , and outputs said signals to said apparatus ... A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ... Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205. ... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of

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transferring at least one of said at least one of a code and a datum and said at least one control signal to said transmitter	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.		signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	Page 13 lines 25-26.	The present invention employs signals embedded in programming.
	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...
			Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.

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at a specific time; and	Column 20 line 27.	Five minutes later, ...	Page 471 lines 26-28.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message ...
transmitting said at least one instruct signal, said at least one of said second code and a datum, and said at least one control signal.	Column 12 lines 45-47. Column 4 lines 5-6. Column 2 lines 63-66. Column 3 lines 6-8.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ... These techniques employ signals embedded in programs. (The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ... Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 337 lines 1-8. Page 13 lines 25-26. Page 14 lines 27-29. Page 14 line 35 to page 15 line 2.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ... The present invention employs signals embedded in programming. (The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ... Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
	Column 20 lines 27-33.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, ...	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be

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				<p>transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause ...</p>
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214. The method of claim 213, wherein said at least one control signal is effective to	Column 20 lines 27-33.	<p>Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, ...</p>	Page 471 line 26 to page 472 line 17.	<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause ...</p>
output a subscriber order for	Column 20 lines 42-45.	<p>Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer ...</p>	Page 472 lines 23-27.	<p>... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p>
a product	Column 20 line 21.	... a printed copy ...	Page 471 line 8.	... your own printed copy ...

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or service designated by said offer, said method further comprising the steps of	Column 20 lines 33-36.	... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	Page 476 line 34 to page 477 line 8.	(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.
communicating to said transmitter and transmitting	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 477 lines 8-17.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....
			Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so

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<p>information which is effective at said at least one of a plurality of receiver stations to</p> <p>select or</p>	<p>Column 20 lines 27-33.</p> <p>Column 20 lines 49-54.</p>	<p>Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, ...</p> <p>Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received.</p>	<p>Page 471 line 26 to page 472 line 17.</p> <p>Page 473 line 29 to page 474 line 1</p> <p>Page 314 line 30-33.</p>	<p>as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause ...</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p> <p>At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated</p>

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assemble specific information to communicate to a remote data collection site.	Column 9 line 68 to column 10 line 2.	The controller, 20, instructs buffer/comparator, 14, what signals to discard and how to mark signals and assemble signal strings.	Page 32 lines 20-21. Page 223 lines 22-33.
			intermediate or output apparatus. Buffer/comparator, 14, operates under control of controller, 20, ... Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter & monitor information from (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing information from clock, 18.
	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion then discard all information of said record from its memory and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion. Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined

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				fashion or fashions, what received information should be recorded, ...
	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	Page 28 lines 25-35.	[Signal processor in Fig.7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
		that site can determine for billing purposes that the recipe was,	Page 44 lines 26-30.	... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...
			Page 471 lines 26-31.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,...
			Page 473 lines 3-8.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...
		first, ordered	Page 472 lines 23-27 with	Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14,

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				of signal processor, 200, which record contains particular program unit information and TV567# information.
		and, second, delivered.	<p>Page 471 lines 14-16.</p> <p>Page 473 line 29 to Page 474 line 1.</p>	<p>Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p>

215. The method of claim 213, further comprising the steps of receiving at least one of said signal and said at least one of a code and a datum at a receiver in said transmitter station,	Column 10 lines 61-64.	Incoming programing transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.
	Column 20 lines 27- 31.	Five minutes later, a signal is identified in the incoming programming on TV set, 202,	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the

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			by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 ...		"Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...
	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...		Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...
	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.		Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
communicating said received at least one of said at least one control signal and said at least one of a code and a datum from said receiver to a memory location, and	Column 11 lines 1-3.	The other path flows from each distribution amplifier, 63 through 70, individually to signal processor, 71.		Page 325 lines 24-27.	The other path inputs the transmission of said given receiver/demodulator/ input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, individually to signal processor system, 71.
storing said received at least one of said at least one control signal and	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion ...		Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received

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said at least one of a code and a datum at said memory location for a period of time prior to communicating				Page 36 line 32 to page 37 line 3.	information in a predetermined fashion. Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs
	said received at least one of said at least one control signal and said at least one of a code and a datum to said transmitter.	Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ...	Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...
216. A method of processing signals at a receiver station having		Column 10 lines 15-20.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	Page 324 lines 8-17.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.
a computer,		Column 11 lines 15-17.	Cable program controller and computer, 73, is the central automatic control unit for the transmission facility.	Page 326 lines 19-20.	Cable program controller and computer, 73, is the central automatic control unit for the transmission station.
a programmable		Column 8 lines 20-27.	The signal processor apparatus also has a	Page 33 lines 7-20.	Signal processor, 26, has a controller device

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controller, and			controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.		which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...
an output device,	Column 10 lines 43-47.	... and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 325 lines 1-4.	... apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	
said computer being programmed to store user data and	Column 11 lines 21-24.	Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ...	Page 326 lines 30-33.	Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.	
communicate information	Column 11 lines 44-46.	Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Page 328 lines 14-16.	Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...	
based on said stored user data,	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or	

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said programmable controller being programmed to control said receiver station	Column 7 lines 50-58.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 31 lines 10-18.</p>	<p>network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.</p>
in response to instructions	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...	Page 325 line 34 to page 326 line 7.	<p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission</p>

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from a remote supplier, said method comprising the steps of:		Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33 Page 59 lines 29-33.	station;.... A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
				Page 25 line 34 to page 26 line 1. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
	(a) receiving downloadable processor instructions;	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV

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	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...	<p>Page 325 line 34 to page 326 line 7.</p> <p>Page 59 lines 29-33</p>
		demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire ...	<p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p>
(b) detecting said downloadable processor instructions;	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...	<p>Page 325 line 34 to page 326 line 7.</p> <p>Page 59 lines 29-33</p>
		demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire ...	<p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....</p> <p>A SPAM message is the modality whereby the</p>

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	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. This base band signal is then transferred through separate paths to three separate detector devices.
(c) passing a portion of said downloadable processor instructions selectively to a first apparatus;	Column 7 lines 39-49.	In a pre-determined fashion, buffer/comparator, 8, identifies signal words and/or signal units that must be decrypted, either in whole or in part, and passes identified signal words and/or units to decryptor, 10. Decryptor, 10, uses conventional decrypter techniques, well known in the art, in a pre-determined fashion to decrypt such signals as required. Decryptor, 10, then passes the decrypted signals to processor or monitor, 12. Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 21-26. Page 30 line 31 to page 31 line 1. Page 30 lines 29-30.	In a fashion described more fully below, buffer/comparator, 8, and a controller, 20, which, too, is described more fully below, determine whether signal processor, 26, is enabled to decrypt said information. If signal processor, 26, is so enabled, buffer/comparator, 8, transfers said information to decryptor, 10. Decryptor, 10, is a standard digital information decryptor, well known in the art, that ... uses conventional decryptor techniques, well known in the art, to decrypt said signals as required. Decryptor, 10, transfers decrypted signals to controller, 12. Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
(d) executing a portion of said downloadable processor instructions at said programmable controller based on said downloadable code;	Column 9 lines 21-23.	[The Controller, 20] is interactive with external sources via telephone connection, 22, and ...	Page 273 lines 6-19.	Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of

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		... can be reprogramed from such remote sources.	Page 537 lines 6-17.	<p>ROM, 21, to said first computer followed by a particular instruct-to- receive signal. Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.</p> <p>At 3:10 AM, GMT, said <i>European master network station</i> transmits particular SPAM message information, embedded in the information of said master transmission, including a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain operating system instructions. In so doing, said <i>European master network station</i> inputs operating system instructions to all SPAM apparatus and receiver station computers, 73, and microcomputers, 205, thereby causing said apparatus and computers, 73 and 205, as described above in "PREPROGRAMMING RECEIVER STATION OPERATING SYSTEMS," to commence operating under control of the instructions of said operating systems.</p> <p>... particular information of said TELEPHON.EXE module that causes ... signal processor, 200, to transmit the information ... via telephone network in the fashion of example #10, to a computer at a particular remote data collection station.</p> <p>Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each farmer expects to harvest during the 2027 growing season. Automatically, the received data is aggregated, in a fashion well known in the art, at the computer of said <i>European master network</i> origination and control station ... Then, at 3:59 PM, on Thursday, February</p>
			with respect to page 555 line 24 to page 556 line 14.	

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	<p>Column 8 lines 20-27.</p> <p>The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.</p> <p>Column 9 lines 57-63.</p> <p>The [controller, 20,] will control buffer/comparator, 8, to discard received duplicate and partial signals, to mark signals with correct channel identifiers, to transfer signals to decrypter, 10, and processor or monitor, 12, as required, and to perform such other functions as buffer/comparator, 8, performs.</p>		<p>Page 33 lines 7-20.</p> <p>18, 2027, the cycle of generating and communicating information of farmers is repeated ...</p> <p>Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...</p> <p>Said failures to match cause the controllers, 20, of said stations automatically ... to cause said buffer/comparators, 8, to discard all received information of said second message; and to cause ... said buffer/comparators, 8, to commence processing in the conventional fashion.)</p> <p>... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. Automatically, oscillator, 6, causes mixer, 3, to select the frequency of channel 13 and input said frequency to decoder, 30. Controller, 20, then transmits a particular preprogrammed wireless-13 instruction to said control processor, 39J, that informs said processor, 39J, wireless channel 13 is inputted to decoder, 30.</p> <p>... commence transferring information from control processor, 39J, to buffer/comparator, 8, then to transmit a message that consists of binary information of a "00" header then the execution segment information of the pseudo command then a meter-monitor segment containing said monitor information in RAM</p>	
			<p>Page 146 line 31 to page 147 line 3.</p> <p>Page 258 lines 17-25.</p> <p>Page 260 lines 5-13.</p>	

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					(including the associated channel mark and the format information of said information) then any padding bits required to end said message. (Hereinafter, said message is called the "3rd-old-program-message (#5)".)
				Page 147 lines 29-31.	Then said decrypt-with-J instructions cause controller, 20, to activate the output capacity of buffer/comparator, 8, that outputs to decryptor, 10;
				Page 149 lines 17-20.	Next said decrypt-a-00-header-message instructions cause controller, 20, to cause buffer/comparator, 8, to transfer to decryptor, 10, a quantity of signal words of said binary information of the second message ...
				Page 149 lines 27-29.	Decryptor, 10, commences receiving said information, decrypting it using said key J information and transferring it to controller, 12, ...
(e) controlling said computer in accordance with said downloadable processor instructions; and		Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.

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			designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.		message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.
(f) storing information evidencing a function performed by or initiated by said first apparatus in consequence of downloadable processor instructions selectively having been passed to said first apparatus.	Column 12 lines 45-53.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automation for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.	Page 337 lines 1-19.		Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6,

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				information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.
216. A method of processing signals at a receiver station having	Column 10 lines 15-20.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	Page 324 lines 8-17.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.
a computer,	Column 11 lines 15-17.	Cable program controller and computer, 73, is the central automatic control unit for the transmission facility.	Page 326 lines 19-20.	Cable program controller and computer, 73, is the central automatic control unit for the transmission station.
a programmable controller, and	Column 8 lines 20-27.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.	Page 33 lines 7-20.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has a capacity for controlling the operation of all elements of the signal processor ...
an output device,	Column 10 lines 43-47.	... and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel	Page 325 lines 1-4.	... apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and

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said computer being programmed to store user data and	Column 11 lines 21-24.	combining and multiplexing system, 92. Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ...	Page 326 lines 30-33.	multiplexing system, 92. Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.
communicate information	Column 11 lines 44-46.	Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Page 328 lines 14-16.	Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...
based on said stored user data,	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...

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said programmable controller being programmed to control said receiver station		Column 7 lines 50-58.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 49 lines 26-27. Page 31 lines 10-18.	Meter-monitor segments contain meter information and/or monitor information. Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
in response to instructions		Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....
from a remote supplier, said method comprising the steps of:		Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission

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					consists of a series or stream of sequentially transmitted SPAM messages. At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
(a) receiving downloadable processor instructions;				<p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 324 lines 23-33.</p>	<p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire ...</p> <p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68,</p>
		Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 325 line 34 to page 326 line 7.	
		Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...		

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(b) detecting said downloadable processor instructions;	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...	Page 59 lines 29-33	69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;.... A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;.... A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 7 lines 39-49.	In a pre-determined fashion, buffer/comparator, 8, identifies signal words and/or signal units that must be decrypted, either in whole or in part, and	Page 30 lines 21-26.	This base band signal is then transferred through separate paths to three separate detector devices. In a fashion described more fully below, buffer/comparator, 8, and a controller, 20, which, too, is described more fully below, determine whether signal processor, 26, is
(c) passing a portion of said downloadable processor instructions selectively				

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to a first apparatus;			passes identified signal words and/or units to decrypter, 10. Decrypter, 10, uses conventional decrypter techniques, well known in the art, in a pre-determined fashion to decrypt such signals as required. Decrypter, 10, then passes the decrypted signals to processor or monitor, 12. Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 line 31 to page 31 line 1. Page 30 lines 29-30.	enabled to decrypt said information. If signal processor, 26, is so enabled, buffer/comparator, 8, transfers said information to decryptor, 10. Decryptor, 10, is a standard digital information decryptor, well known in the art, that ... uses conventional decryptor techniques, well known in the art, to decrypt said signals as required. Decryptor, 10, transfers decrypted signals to controller, 12. Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
(d) executing a portion of said downloadable processor instructions at said programmable controller based on said downloadable code;	Column 9 lines 21-23.	[The Controller, 20] is interactive with external sources via telephone connection, 22, and can be reprogramed from such remote sources.	Page 273 lines 6-19. Page 537 lines 6-17.	Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a particular instruct-to- receive signal. Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20. At 3:10 AM, GMT, said <i>European master network station</i> transmits particular SPAM message information, embedded in the information of said master transmission, including a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain operating system instructions. In so doing, said European master network

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			<p>station inputs operating system instructions to all SPAM apparatus and receiver station computers, 73, and microcomputers, 205, thereby causing said apparatus and computers, 73 and 205, as described above in "PREPROGRAMMING RECEIVER STATION OPERATING SYSTEMS," to commence operating under control of the instructions of said operating systems.</p> <p>... particular information of said TELEPHON.EXE module that causes ... signal processor, 200, to transmit the information ... via telephone network in the fashion of example #10, to a computer at a particular remote data collection station.</p> <p>Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each farmer expects to harvest during the 2027 growing season. Automatically, the received data is aggregated, in a fashion well known in the art, at the computer of said <i>European master network</i> origination and control <i>station</i> ... Then, at 3:59 PM, on Thursday, February 18, 2027, the cycle of generating and communicating information of farmers is repeated ...</p>
		<p>The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.</p>	<p>with respect to page 555 line 24 to page 556 line 14.</p>
	<p>Column 8 lines 20-27.</p>		<p>Page 33 lines 7-20.</p>

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	Column 9 lines 57-63.	The [controller, 20.] will control buffer/comparator, 8, to discard received duplicate and partial signals, to mark signals with correct channel identifiers, to transfer signals to decrypter, 10, and processor or monitor, 12, as required, and to perform such other functions as buffer/comparator, 8, performs.	<p>Page 146 line 31 to page 147 line 3.</p> <p>Said failures to match cause the controllers, 20, of said stations automatically ... to cause said buffer/comparators, 8, to discard all received information of said second message; and to cause ... said buffer/comparators, 8, to commence processing in the conventional fashion.)</p> <p>... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. Automatically, oscillator, 6, causes mixer, 3, to select the frequency of channel 13 and input said frequency to decoder, 30. Controller, 20, then transmits a particular preprogrammed wireless-13 instruction to said control processor, 39J, that informs said processor, 39J, wireless channel 13 is inputted to decoder, 30.</p> <p>... commence transferring information from control processor, 39J, to buffer/comparator, 8, then to transmit a message that consists of binary information of a "00" header then the execution segment information of the pseudo command then a meter-monitor segment containing said monitor information in RAM (including the associated channel mark and the format information of said information) then any padding bits required to end said message. (Hereinafter, said message is called the "3rd-old-program-message (#5)".)</p> <p>Then said decrypt-with-J instructions cause controller, 20, to activate the output capacity of buffer/comparator, 8, that outputs to decryptor, 10;</p> <p>Next said decrypt-a-00-header-message instructions cause controller, 20, to cause buffer/comparator, 8, to transfer to decryptor,</p>	
			Page 258 lines 17-25.	
			Page 260 lines 5-13.	
			Page 147 lines 29-31.	
			Page 149 lines 17-20.	

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			10, a quantity of signal words of said binary information of the second message ... Decryptor, 10, commences receiving said information, decrypting it using said key J information and transferring it to controller, 12, ...	
(e) controlling said computer in accordance with said downloadable processor instructions; and	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 149 lines 27-29. Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions.... ... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information. For example, computer, 73, receives a given SPAM message that contains given "program
			Page 84 lines 26-28.	
			Page 28 lines 26-27.	
			Page 49 lines 26-27.	
	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53,	Page 328 line 22 to page 329 line 1.	

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				<p>unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>		
	<p>should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Column 11 lines 57-65.</p>		<p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.</p>	<p>Page 329 line 2-22.</p>	
				<p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution</p>		

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					amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.
(f) storing information evidencing a function performed by or initiated by said first apparatus in consequence of downloadable processor instructions selectively having been passed to said first apparatus.	Column 12 lines 45-53.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.	Page 337 lines 1-19.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.	

217. A method of controlling a remote television transmitter station to communicate television program material to	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
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			Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
			Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
	Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. FIGS. 3A, 3B, and 3C illustrate the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 324 lines 18-21.	Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
one or more receiver stations,	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
			Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
with said remote television transmitter station including a broadcast or cablecast	Column 10 lines 15-20.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of	Page 324 lines 8-17.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may

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		programming or a cable system cablecasting many channels.		transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.
transmitter	Column 10 lines 43-47.	... and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 325 lines 1-4.	... apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
for transmitting television programming,	Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.	Page 339 lines 9-11.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming ...
a plurality of selective transfer devices each operatively connected to said broadcast or cablecast transmitter	Column 10 lines 41-43.	... by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, ...	Page 324 line 34-35.	... a conventional matrix switch, 75, well known in the art, one or more recorder/players, 76 and 78,
for communicating said television programming,	Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.	Page 339 lines 9-11.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming ...
a television receiver for receiving said television programming from	Column 10 lines 30-39.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV	Page 324 lines 23-31.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic

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at least one origination transmitter station,	Column 19 lines 60-63.	demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions. At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33. Page 25 line 34 to page 26 line 1. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and page 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 325 line 34 to page 326 line 7.	programming transmissions are received by other programming input means, 62. A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor ... At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;.... A SPAM message is the modality whereby the original transmission station that originates
a control signal detector, and	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...	Page 59 lines 29-33	

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<p>a controller or computer capable of controlling</p> <p>one or more of said selective transfer devices, and with said remote transmitter station adapted to</p> <p>detect the presence of one or more control signals,</p>	Column 6 lines 48-50.	<p>This base band signal is then transmitted through separate paths to three separate detector devices.</p>	Page 34 line 35 to page 35 line 1.	<p>said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p>
	Column 11 lines 15-17.	<p>Cable program controller and computer, 73, is the central automatic control unit for the transmission facility.</p>	Page 326 lines 19-20.	<p>This base band signal is then transferred through separate paths to three separate detector devices.</p>
	Column 11 lines 44-46.	<p>Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.</p>	Page 328 lines 14-16.	<p>Cable program controller and computer, 73, is the central automatic control unit for the transmission station.</p>
	Column 11 lines 3-5.	<p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...</p>	Page 325 line 34 to page 326 line 7.	<p>Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78,</p>
			Page 59 lines 29-33	<p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....</p>
	Column 6 lines 48-50.	<p>This base band signal is then transmitted</p>	Page 34 line 35 to page	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p>

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	through separate paths to three separate detector devices.	35 line 1.
to control the communication of said television programming	<p>Column 8 lines 58-59.</p> <p>Control signals can be passed to the apparatus by means of the programming transmissions ...</p> <p>Column 11 lines 57-64.</p> <p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...</p>	<p>Page 59 lines 29-33.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>Page 329 line 2-20.</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.</p>
in response to said one or more control signals, and	<p>Column 11 lines 38-46.</p> <p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the</p>	<p>Page 327 line 35 to page 328 line 13.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73,</p>

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(1) receiving said television programming at said at least one origination transmitter station and		Column 19 line 53-56.	to the field.	Page 25 lines 26-33.	system, 93. During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
	delivering said television programming to at least one origination transmitter, said television programming having an associated instruct signal	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	which is effective at said one or more receiver stations to control a receiver station apparatus and	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.	Page 25 line 34 to page 26 line 1. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 435 lines 16-18. Page 267 lines 20-28 from example #5.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ... In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5)

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having a code or datum	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	Page 268 line 28 to page 269 line 12 from example #5.	and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
	Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words	Page 14 line 32 to page 15 line 2.	In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)

having a code or datum

Column 2 lines 63-66.

(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...

Page 14 lines 27-29.

(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...

Column 3 lines 3-8.

The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words

Page 14 line 32 to page 15 line 2.

The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a

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to serve as evidence of		Column 7 lines 65-67.	<p>are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.</p>	<p>Page 31 line 30 to page 32 line 6.</p> <p>string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...</p>	
the passing of said instruct signal to a controllable device		Column 7 lines 47-49.	<p>Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.</p>	<p>Page 30 lines 29-30.</p> <p>Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.</p>	
or of a functioning of said controllable apparatus in response to said instruct signal;		Column 7 lines 59-60.	<p>If [a signal or signals] are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.</p>	<p>Page 31 lines 18-22.</p> <p>If [a signal or signals] contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.</p>	
(2) receiving said one or more control signals which		Column 11 lines 3-14.	<p>Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and pass them, along with information identifying the channel source of each signal, externally to code reader, 72. ...</p> <p>Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73.</p>	<p>Page 325 line 34 to page 326 line 11.</p> <p>At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station, automatically adds, in a predetermined fashion source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68,</p>	

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<p>at the remote intermediate television transmitter station operate to control the communication of a specific one or more of said plurality of units of television programming; and</p>	<p>Column 11 lines 38-46.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.</p>	<p>69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.</p> <p>Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Computer, 73, has means for communicating</p>	<p>Page 326 lines 16-18.</p>	<p>69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.</p>
				<p>Page 327 line 35 to page 328 line 13.</p>	<p>Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.</p>
				<p>Page 84 lines 26-28.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p>
				<p>Page 28 lines 26-27.</p>	<p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>
				<p>Page 49 lines 26-27.</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p>
				<p>Page 328 lines 14-16.</p>	<p>... monitor information that identifies what programming is available, ...</p>

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	<p>Column 11 lines 50-57.</p> <p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87.</p> <p>controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>control information with matrix switch, 75, and video recorders, 76 and 78, ...</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
<p>(3) transmitting said one or more control signals to said at least one origination transmitter</p>	<p>Column 19 lines 60-63.</p> <p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.</p>	<p>Page 59 lines 29-33.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p>
	<p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7.</p> <p>Applicants teach this as the composition of the instruction signal of page 25 line 34. See</p>	

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	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
before a specific time.	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...

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218. The method of claim 217, wherein said one or more control signals comprise a code or	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information or one complete message unit . Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information or one complete message unit . Examples of signal units are a unique code identifying a programming unit, or a ...
datum which	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
operates at the remote intermediate television transmitter station to	Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion ...	Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.
identify said specific television programming, said method further comprising the step of:	Column 11 lines 38-39.	By comparing identification signals on the incoming programming with the programming schedule ...	Page 36 line 32 to page 37 line 3.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs
			Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6

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				<p>should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
transmitting a schedule which	Column 11 lines 39-41.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, ...	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p>	<p>... with information of the programming schedule, received earlier from input, 74, and/or network, 98, ...</p> <p>... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.</p>
operates at the remote intermediate television transmitter station to	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>

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<p>communicate said specific television programming to a transmitter at said specific time.</p>	<p>Column 11 lines 50-57.</p> <p>... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.</p>	<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 328 line 22 to page 329 line 1.</p>	<p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>
<p>219. The method of claim 217, wherein said specific time is a scheduled time of transmitting said television programming</p>	<p>Column 11 lines 28-31.</p>	<p>Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.</p>	<p>Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...</p>

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<p>at said remote intermediate television transmitter station or</p> <p>said one or more control signals are effective at the remote intermediate television transmitter station to control one or more of said plurality of selective transfer devices at different times.</p>	<p>Column 11 lines 38-43.</p>	<p>By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.</p>	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program</p>	
<p>Column 11 lines 57-65.</p>	<p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the</p>		<p>Page 28 lines 26-27.</p>	<p>Page 84 lines 26-28.</p>	

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		incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, and instructs the recorder/player, 76 or 78, to turn on and record the programming.	unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; to cause said selected recorder, 76 or 78, to turn on and record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78. In so doing, computer, 73, causes said selected recorder, 76 or 78, to record said programming.
Column 11 lines 66 to Column 12 line 8.	Recorder/players, 76 and 78, can communicate programming with each other through matrix switch, 75.	... causes computer, 73, ... to cause switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record ... unit D.	Page 332 lines 24-30.
		Computer, 73, causes ... switch, 75, to configure its switches so as to transfer the output of recorder, 78, to the input of recorder, 76. Computer, 73, causes recorder, 78, to play and recorder, 76, to record for the duration of program unit Y.	Page 333 lines 15-21.
	If controller/ computer, 73, determines at any time that it is necessary	Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play	Page 331 lines 17-33.

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		to reorganize the order in which programming units are stored on either recorder/player or on both,	Page 331 lines 16-25.	<p>according to a given schedule. ... Caused to organize the locations of said units to play according to said schedule, computer 73, ...</p> <p>Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D—are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first.</p>
			Page 334 lines 1-6.	<p>In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder because unit D is scheduled to play on the same channel immediately after Y.</p>
			Page 331 line 17 to page 334 line 6	<p><i>See generally.</i></p>
		controller/computer, 73, can use techniques for reorganizing files stored on multidisk units, which techniques are well known to computer operators, and order the execution of such techniques by passing appropriate instructions to of matrix switch, 75, and recorder/ players, 76 and 78.	For example, page 331 lines 17-33.	<p>Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D—are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first. According to the schedule recorded at computer, 73, Q should play first on the cable channel modulated by cable channel</p>

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			<p>modulator, 83; then subsequently Y and W should start to play simultaneously on the channels modulated by modulators, 83 and 87 respectively; then D should play on the channel modulated by modulator, 83, immediately after Y ends. Caused to organize the locations of said units to play according to said schedule, computer 73, ...</p> <p>Determining said located space to be available causes computer, 73, to cause recorder, 76, to move forward or rewind to the start of program unit D; to cause recorder, 78, to rewind to the start of said located space; and to cause switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record for the duration of program unit D. ...</p>
		For example, page 332 lines 23-31.	<p>Computer, 73, causes recorder, 78, to move forward or rewind to the start of program unit Y; causes recorder, 76, to rewind to the start of the available space; and causes switch, 75, to configure its switches so as to transfer the output of recorder, 78, to the input of recorder, 76. Computer, 73, causes recorder, 78, to play and recorder, 76, to record for the duration of program unit Y. ...</p> <p>In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder because unit D is scheduled to play on the same channel immediately after Y.</p>
		For example, page 333 lines 15-21.	
		For example, page 334 lines 1-6.	

220.	A method of	Column 19 lines 63-64.	This signal is identified by decoder, 203,	Page 26 lines 1-2.	Said signal is identified by decoder, 203;
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processing signals			and transferred via processor, 204, to microcomputer, 205.	Page 37 line 26 to page 38 line 8.	transferred to microcomputer, 205; and ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
at a receiver station	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.		Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons. Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
to deliver an output to supplement mass medium programming,	Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.		Page 472 lines 23-27.	...Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information. Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion

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	Column 20 lines 19-23.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."	Page 471 lines 6-13.	described above. Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#".
said receiver station having a processor, a storage device,	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
and one or more output devices, with at least one of said one or more output devices adapted to output mass medium programming, said method comprising the steps of:	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Page 470 lines 1-3 and Page 470 lines 9-12.	...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the

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	Column 20 lines 48-49.	... and thence to printer, 221, for printing.	Page 470 lines 19-21. Page 475 lines 1-2.	<p>particular transmission of said program that is ...</p> <p>... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.</p> <p>Receiving said output information causes printer, 221, to print the information of said specific recipe and list.</p>
(1) receiving mass medium programming at said receiver station from a mass medium programming source and	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Page 470 lines 1-3 and Page 470 lines 9-12.	<p>...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."</p> <p>At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...</p>
	Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200.	Page 470 lines 19-21. Page 420 lines 21-29.	<p>... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.</p> <p>Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions.</p> <p>The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.</p>
outputting the mass medium programming at an output device, said	Column 20 lines 16-23.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201.	Page 470 lines 1-3 and	<p>...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic</p>

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output device adapted to output mass medium programming;			<p>Julia Childs's "The French Chef" is one such program. Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."</p>	<p>Page 470 lines 9-13.</p>	<p>Meals of India."</p> <p>At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is retransmitted by the intermediate station of Fig. 6; ...</p> <p>... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.</p> <p>Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#".</p>
	(2) receiving a broadcast or cablecast information transmission at said receiver station, said information transmission	Column 6 lines 23-30.	<p>A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.</p>	Page 29 lines 4-15.	<p>Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.</p>
including one or more instruct signals to direct output to supplement said mass medium programming;		Column 20 lines 31-36.	<p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate</p>	Page 471 line 26 to page 472 line 17.	<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p>

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		channel to receive the recipe in encoded digital form ...		<p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p>
			<p>Page 476 line 34 to page 477 line 8.</p>	
			<p>Page 477 lines 8-17.</p>	

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(3) detecting a signal in said information transmission and passing said detected signal to a processor; and		Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
		Column 7 lines 6-11.	If one returns to FIG. 1, one sees that the three separate lines of information outputted from TV signal decoder, 30, are then gated to a buffer/comparator, 8, which also receives other inputs from the other separate receivers comprising similar filters, demodulators, and decoders for other channels of interest.	Page 29 line 33 to page 30 line 5.	Decoder, 30, which is shown in detail in Fig. 2A, and decoder, 40, which is shown in Fig. 2B, detect signal information embedded in the respective inputted television and radio frequencies, ... and output said signals and said modified signals to buffer/comparator, 8.
(4) controlling said processor based on said detected instruct signal, said step of controlling comprising:		Column 20 lines 31-36.	This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...
				Page 476 line 34 to page 477 line 8.	(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to

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				<p>cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p>
(a) receiving an instruct signal which is effective to control a receiver station apparatus,	Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
	Column 7 lines 50-54.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.	Page 31 lines 10-14.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both.
a code or datum to serve as evidence of	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...
	Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a	Page 14 line 32 to page 15 line 2.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a

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	Column 7 lines 65-67.	<p>transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.</p>	<p>Page 31 line 30 to page 32 line 6.</p> <p>transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...</p>	
	Column 8 lines 4-7.	<p>Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.</p>	<p>Page 31 line 30 to page 32 line 1.</p> <p>Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...</p>	
	Column 8 lines 46-50.	<p>The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.</p>	<p>Page 33 lines 18-20.</p> <p>Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...</p> <p>The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.</p> <p>... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.</p>	

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the passing of said instruct signal to a controllable device	Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.
or of the functioning of said controllable apparatus in response to said instruct signal,	Column 7 lines 50-60.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 31 lines 10-22.
and (b) outputting said instruct signal to provide supplemental output	Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 31 lines 14-18.
on the basis of stored user	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.
	Column 20 lines 26-27.	... to hold and process further in a predetermined fashion.	Page 471 lines 22-25.
data of interest; and	Column 20 lines 23-26.	The viewer then presses buttons 567 on	Page 471 lines 14-21.
		Each subscriber--in particular, the	

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		local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...		subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.
outputting said output to supplement mass medium programming at an output device	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 473 lines 3-13.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe ... instructions ...
			Page 477 lines 12-17.	... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....
			Page 477 lines 23-29.	... causes ... said decoder, 290, to detect and process properly the information of said second message.
			Page 478 lines 1-5.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
			Page 475 lines 1-2.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.
on the basis of said received instruct signal.	Column 20 lines 31-36.	This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200,	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and

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		<p>should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...</p>		<p>transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of</p>	<p>Page 476 line 34 to page 477 line 8.</p> <p>Page 477 lines 8-17.</p>	

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			said decoder, 290, to receive said transmission ...
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221. The method of claim 220, wherein said output to supplement mass medium programming comprises video, text, or	Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 473 lines 3-13.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe... instructions ...
			Page 477 lines 12-17.	... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....
			Page 477 lines 23-29.	... causes ... said decoder, 290, to detect and process properly the information of said second message.
			Page 478 lines 1-5.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
			Page 475 lines 1-2.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.

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	Column 7 lines 39-47.	<p>which, in a predetermined fashion, signal processor, 200, decrypts and transfers</p> <p>to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.</p> <p>In a pre-determined fashion, buffer/comparator, 8, identifies signal words and/or signal units that must be decrypted, either in whole or in part, and passes identified signal words and/or units to decrypter, 10. Decrypter, 10, uses</p>	<p>Page 282 line 2 to page 283 line 33.</p> <p>Page 478 lines 1-5.</p> <p>Page 30 lines 21-26.</p>	<p>provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")</p> <p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p> <p>In a fashion described more fully below, buffer/comparator, 8, and a controller, 20, which, too, is described more fully below, determine whether signal processor, 26, is enabled to decrypt said information. If signal processor, 26, is so enabled,</p>

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	conventional decrypter techniques, well known in the art, in a pre-determined fashion to decrypt such signals as required. Decrypter, 10, then passes the decrypted signals to processor or monitor, 12.	buffer/comparator, 8, transfers said information to decryptor, 10. Decryptor, 10, is a standard digital information decryptor, well known in the art, that ... uses conventional decryptor techniques, well known in the art, to decrypt said signals as required.	Page 30 lines 31-35.
Column 13 lines 27-29.	The signal or signals may also inform decrypter/interrupter, 101, how to decrypt ...	Decryptor, 10, transfers decrypted signals to controller, 12. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of said audio portion inputted from said tuner, 215, to the output that outputs to a selected decryptor, 107, thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio). Automatically, controller, 20, selects information of cipher key Ca from among the information of said portion; transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio information, using said key information and selected decryption cipher algorithm C, and outputting decrypted information of the audio portion of the "Wall Street Week" program transmission to matrix switch, 258.	Page 30 line 35 to page 31 line 1. Page 295 line 24 to page 296 line 3.
		The second message conveys the second combining synch command. In example #2, before said message is embedded at the program originating studio and transmitted, the execution segment of said command and all of the meter-monitor segment except for the length-token are encrypted, using standard encryption techniques, well known in the art, that encrypt binary information without altering the number of bits in said information. Partially encrypting the second message in	See also page 143, lines 10-30.

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					<p>this fashion leaves the cadence information of said message unencrypted. In other words, the "00" header, the length- token, and any padding bits added at the end of said message remain unencrypted. Said message is only partially encrypted in order to enable subscriber stations that lack capacity to decrypt said message to process the cadence information of said message accurately.</p> <p>In example #2, the encryption of said execution segment is done in such a fashion that, after encryption, said segment is identical to a particular execution segment that addresses URS signal processors, 200, and instructs said processors, 200, to use a particular decryption key J and decrypt the message in which said segment occurs.</p> <p>Prior to being transmitted, the digital video information is doubly encrypted, ... The digital audio is transmitted in the clear.</p>
		Column 14 lines 2-3.	For example, only the video portion of the transmission may be encrypted.	Page 288 line 33 to page 289 line 3.	
(3) controlling a selective transmission device to communicate said output to supplement mass medium programming comprises to said output device.		Column 18 lines 62-65.	In a predetermined fashion, either microcomputer, 205, or signal processor, 200, instructs tuner, 223, to set cable converter box, 222, to the proper channel,...	<p>Page 423 lines 11-13.</p> <p>Page 424 lines 2-9.</p>	<p>Receiving said message causes said controller, 20, to cause a selected cable converter box, 222, to receive the transmission identified by said channel mark; ...</p> <p>Then receiving a particular to-223 instruction from said control processor, 20A, causes controller, 20, to transmits particular instructions, via said control information transmission link, to said tuner, 223, thereby causing said tuner, 223, to tune its associated cable converter box, 222, the to the particular channel transmission of said multi-channel cable transmission that is identified by said channel mark.</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said</p>
		Column 20 lines 33-36.	... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	Page 476 line 34 to page 477 line 8.	

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			<p>message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its</p>
	Page 477 lines 8-17.		
		... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	<p>Page 437 lines 1-6.</p>
Column 19 lines 23-25.			<p>Page 439 lines 9-15.</p>
			<p>Page 295 lines 6-8.</p>

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			Page 439 lines 9-15.	associated converter box, 201, to convert its... ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
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222. A method of controlling	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	<p>Page 25 line 34 to page 26 line 1.</p> <p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 390 lines 30-35.</p>	<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.</p> <p>Features, benefits, and modes of operation of</p>
one or more of			Page 396 lines 8-10.	

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a plurality of receiver stations each of which includes	Column 3 lines 48-51.	Another method has application at receiver sites such as private homes or public places like theaters, hotels, brokerage offices, etc., whether commercial establishments or not.	Page 12 lines 30-35.	the station of Fig. 7 are demonstrated in the following individual examples. It is the further purpose of this invention to provide means and methods for the automation of ultimate receiver stations, ... Such ultimate receiver stations may be private homes or offices or commercial establishments such as theaters, hotels, or brokerage offices.
	Column 3 lines 48-51.	Another method has application at receiver sites such as private homes or public places like theaters, hotels, brokerage offices, etc., whether commercial establishments or not.	Page 12 lines 30-35.	It is the further purpose of this invention to provide means and methods for the automation of ultimate receiver stations, ... Such ultimate receiver stations may be private homes or offices or commercial establishments such as theaters, hotels, or brokerage offices.
a television receiver,	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Page 470 lines 1-3 and Page 470 lines 9-12.	...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...
a signal detector,	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 470 lines 19-21.	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
at least one computer or processor, and with	Column 8 lines 20-27.	The signal processor apparatus also has a controller device which includes programmable random access memory	Page 471 line 35 to page 472 line 1. Page 33 lines 7-20.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ... Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain

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each said receiver station adapted to detect the presence of one or more control signals and	Column 20 lines 29-30.	<p>controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.</p> <p>... which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.</p>	<p>unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has a capacity for controlling the operation of all elements of the signal processor ...</p> <p>... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>	
	Column 20 lines 27-32.	<p>Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, ...</p>	<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-#</p>	

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	Column 20 lines 37-42.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200,	Page 477 lines 8-23.	memory ... In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating ... By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")
			Page 281 lines 1-6.	... the information of said segments is encrypted prior to transmission ... The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ... Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".
		which, in a predetermined fashion, signal processor, 200, decrypts and transfers	Page 282 line 2 to page 283 line 33.	

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<p>to input a viewer reaction to a specific offer communicated in a television program, said method comprising the steps of:</p>	<p>Column 20 lines 19-26.</p>	<p>to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.</p> <p>Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further ...</p>	<p>Page 478 lines 1-5.</p> <p>Page 471 lines 6-25.</p>	<p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p> <p>Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.</p> <p>Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.</p>
<p>(1) receiving a first code or</p>	<p>Column 10 lines 61-64.</p>	<p>Incoming programing transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.</p>	<p>Page 324 lines 23-33.</p>	<p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic</p>

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	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.
	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.
datum at a transmitter station, wherein said code or datum	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.
designates	Column 20 lines 49-54.	Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received.	Page 473 line 29 to page 474 line 1
a product or service	Column 20 line 21. Column 20 lines 33-36.	... a printed copy instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded	Page 314 line 30-33. Page 471 line 8. Page 476 line 34 to page 477 line 8.
		programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire ... The present invention employs signals embedded in programming. (The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ... Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above. At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus. ... your own printed copy ... (An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is	

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		<p>digital form ...</p>	<p>entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected ALL signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....</p> <p>...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."</p> <p>At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is retransmitted by the intermediate station of Fig. 6; ...</p> <p>... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.</p> <p>Halfway through the program the host says,</p>
<p>offered in a television program or</p>	<p>Column 20 lines 16-23.</p>	<p>Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program. Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."</p>	<p>Page 477 lines 8-17.</p> <p>Page 470 lines 1-3 and</p> <p>Page 470 lines 9-13.</p> <p>Page 470 lines 19-21.</p> <p>Page 471 lines 6-13.</p>

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a viewer reaction to an offer communicated in a television program;		Column 20 lines 19-26.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further ...	Page 471 lines 6-25.	"If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station. Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.
(2) receiving an instruct signal and a second code or datum at said transmitter station, wherein said instruct signal at		Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.	Page 435 lines 16-18. Page 267 lines 20-28 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5)

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		signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)	
		In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)	Page 268 line 28 to page 269 line 12 from example #5.
	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.
	Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits	Page 14 line 32 to page 15 line 2.

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the one or more receiver stations	Column 20 lines 27-29.	encoded together on a single line of video or sequentially in audio. ... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 471 line 35 to page 472 line 1.	together on a single line of video or sequentially in audio. At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
	Column 3 lines 48-51.	Another method has application at receiver sites such as private homes or public places like theaters, hotels, brokerage offices, etc., whether commercial establishments or not.	Page 12 lines 30-35.	It is the further purpose of this invention to provide means and methods for the automation of ultimate receiver stations, ... Such ultimate receiver stations may be private homes or offices or commercial establishments such as theaters, hotels, or brokerage offices.
operates to control a receiver station apparatus and	<i>In General</i> Column 17 lines 39- 44.	Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed, and transfer such signals to such equipment as directed.	<i>In General</i> Page 15 lines 16-23.	The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...
			Page 34 lines 24-26.	... identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus ...
			Page 44 lines 14-15.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ...
			Page 95 lines 18-21.	Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205.
	<i>Specifically</i> Column 20 lines 29-30.	... which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.	<i>Specifically</i> Page 472 lines 4-12.	... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20.

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said second code or datum		Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ...	Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ...
to serve as evidence of				Page 14 line 32 to page 15 line 2.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
		<i>In General</i> Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	<i>In General</i> Page 31 line 30 to page 32 line 6.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...
		Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder,	Page 31 line 30 to page 32 line 1.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received

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	16.			information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...
	<i>Specifically</i> Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.	<i>Specifically</i> Page 472 lines 23-27.	... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
			Page 473 line 29 to page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
the passing of said instruct signal to a controllable device	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
or of the functioning of said controllable apparatus in response to said instruct signal;	Column 20 lines 29-30.	... which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.	Page 472 lines 4-12.	... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20.
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.

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(3) transferring at least one of said first code or datum and said instruct signal to a transmitter at said transmitter station		Column 11 lines 50-57.	... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
		Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.
		Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...
		Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
	at a specific time; and	Column 20 line 27.	Five minutes later, ...	Page 471 lines 26-28.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message ...
(4) transmitting		Column 12 lines 45-47.	Beyond channel combining system and	Page 337 lines 1-8.	Fig. 6 shows particular signal processor

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said instruct signal and at least one of (i) said first code or datum and (ii) said second code or datum from said transmitter station.		multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ...		system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...
	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.
	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...
	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
	Column 20 lines 27-33.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, ...	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for- entered-information-and-process instructions, and executing said instructions causes

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	Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.	<p>Page 472 lines 23-27.</p> <p>Page 473 line 29 to page 474 line 1.</p>	<p>controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause ...</p> <p>... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p>
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223. The method of claim 222, wherein a television program is displayed at said one or more receiver stations	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	<p>Page 470 lines 1-3 and</p> <p>Page 470 lines 9-12.</p> <p>Page 470 lines 19-21.</p> <p>Page 26 lines 4-11.</p>	<p>...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India."</p> <p>At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...</p> <p>... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.</p> <p>... "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey</p>
and said instruct signal directs the output of	Column 19 line 64 to column 20 line 2.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,		

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video,			for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.	
audio,	Column 18 lines 14-19.	TV signal decoder, 203, detects signals in the programming transmission on the channel which signals it transfers to monitor or processor, 204. Monitor or processor, 204, determines that certain signals are addressed to switch, 212, and transfers these signals to switch, 212.		And the Fig. 1C combining is displayed. Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of ... an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, ... Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.	
	Column 18 lines 22-25.	Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly. These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.		Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.	
or text to supplement	Column 20 lines 49-54.	Other signal decoder, 227, identifies a		Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ... Receiving said message causes the controller,	

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said television program or		signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received.	page 474 line 1	39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
said television program prompts a subscriber to react, said method further comprising the steps of	Column 20 lines 16-23.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program. Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."	Page 314 line 30-33. Page 470 lines 1-3 and Page 470 lines 9-13.	At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus. ...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is retransmitted by the intermediate station of Fig. 6; to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M. Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber

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<p>communicating to said transmitter and transmitting a second instruct signal which is effective at said one or more receiver stations to process a subscriber reaction.</p>	<p>Column 20 lines 27-33.</p>	<p>Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, ...</p>	<p>Page 471 line 26 to page 472 line 17.</p>	<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for- entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause ...</p>	<p>is "TV567#".</p>
<p>224. The method of claim 222, wherein a television program is displayed at said one or more receiver stations and a first instruct signal directs said one or more receiver stations to process a subscriber reaction to said television program, said method further comprising the steps of</p>	<p>Column 20 lines 27-33.</p>	<p>Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, ...</p>	<p>Page 471 line 26 to page 472 line 17.</p>	<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for- entered-information-and-process instructions, and executing said instructions causes</p>	

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communicating to said transmitter and transmitting a second instruct signal which is effective at a receiver station to respond to the presence of said subscriber reaction.	Column 20 lines 27-36.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. Receiving said message causes controller, 20, to load and execute said check-for- entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause an instance of ...	Page 471 line 26 to page 472 line 17.	controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause ...
		instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected ALL signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.	Page 476 line 34 to page 477 line 8.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. Receiving said message causes controller, 20, to load and execute said check-for- entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause an instance of ...
			In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to	Page 477 lines 8-17.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to

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	<p><i>For example,</i></p> <p>Column 7 lines 50-58.</p>	<p>Page 31 lines 10-18.</p>	<p>cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p> <p>Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.</p>
225. The method of claim 222, wherein said instruct signal is effective to	<p>Column 20 lines 27-33.</p>	<p>Page 471 line 26 to page 472 line 17.</p>	<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-</p>

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output a subscriber order for said designated	Column 20 lines 42-45.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer ...	Page 472 lines 23-27.	entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause ...
product or	Column 20 line 21.	... a printed copy ...	Page 471 line 8.	... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
service, said method further comprising the steps of	Column 20 lines 33-36.	... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	Page 476 line 34 to page 477 line 8.	... your own printed copy ... (An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.
			Page 477 lines 8-17.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....

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communicating to said transmitter and transmitting	Column 11 lines 50-57.	... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
a second instruct signal which is effective at the receiver station to	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of

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select or		Column 20 lines 49-54.	Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received.	Page 84 lines 26-28. Page 28 lines 26-27. Page 49 lines 26-27. Page 473 line 29 to page 474 line 1	Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions monitor information that identifies what programming is available , ... Meter-monitor segments contain meter information and/or monitor information. Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor; 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
	assemble specific information to communicate to a remote data collection site.	Column 9 line 68 to column 10 line 2.	The controller, 20, instructs buffer/comparator, 14, what signals to discard and how to mark signals and assemble signal strings.	Page 314 line 30-33. Page 32 lines 20-21. Page 223 lines 22-33.	At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus. Buffer/comparator, 14, operates under control of controller, 20, ... Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit

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			<p>information from a particular meter-monitor field of said 1st meter & monitor information (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing information from clock, 18.</p> <p>When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion then discard all information of said record from its memory and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion.</p>	
Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 224 lines 12-18.	<p>Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...</p>	
Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	Page 28 lines 25-35.	<p>[Signal processor in Fig.7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote</p>	

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		<p>automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,....</p> <p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...</p> <p>Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p> <p>Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer</p>	
that site can determine for billing purposes that the recipe was,		<p>Page 44 lines 26-30.</p> <p>Page 471 lines 26-31.</p> <p>Page 473 lines 3-8.</p> <p>Page 472 lines 23-27 with</p> <p>Page 471 lines 14-16.</p> <p>Page 473 line 29 to Page 474 line 1.</p>	
	first, ordered		
	and, second, delivered.		

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				particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
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226. The method of claim 222, further comprising the steps of receiving said instruct signal or said first code or datum at a receiver in the transmitter station,	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.
	Column 20 lines 27- 31.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 ...	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller,

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communicating said received instruct signal or said received first code or datum from said receiver to a memory location, and storing said received instruct signal or said received first code or datum at said memory location for a period of time prior to communicating	said received instruct signal or said received first code or datum to a transmitter.	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ... Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 lines 27-29.	20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ... (The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ... Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
		Column 3 lines 6-8.	The other path flows from each distribution amplifier, 63 through 70, individually to signal processor, 71.	Page 14 line 35 to page 15 line 2.	The other path inputs the transmission of said given receiver/demodulator/ input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, individually to signal processor system, 71.
		Column 11 lines 1-3.	Buffer/comparator, 8, organizes the data stream that it receives according to a predetermined fashion ...	Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.
		Column 7 lines 36-37.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ...	Page 36 line 32 to page 37 line 3.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs
		Column 12 lines 45-47.		Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said

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				transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...		
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227. The method of claim 222, wherein at least one receiver station is adapted to detect the presence of said instruct signal or said first or second code or datum on the basis of a varying pattern of signal composition, said method further comprising the step of	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...		
a varying pattern of signal composition, said method further comprising the step of	Column 4 lines 36-40.	In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.	Page 13 lines 19-24.	They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.		
composing at least some of said instruct signal or said first or second code or datum to be transmitted in said varying pattern.	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.		
			Page 25 lines 34-35.	At this point, an instruction signal is generated at said program originating studio, ...		
			Page 90 lines 4-7.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.		

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	Column 4 lines 36-40.	In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.	20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 13 lines 19-24.	They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.
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228. The method of claim 222, wherein at least one receiver station is adapted to detect the presence of said instruct signal or said first or second code or datum on the basis of a varying location of a signal in an information transmission, said method further comprising the step of	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
a varying location of a signal in an information transmission, said method further comprising the step of	Column 4 lines 36-40.	In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.	Page 13 lines 19-24.	They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.
causing at least some of said instruct signal or said first or second code or datum to be transmitted in said varying location.	Column 11 lines 38-43.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor

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			information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	
			SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....	Page 84 lines 26-28.
			... monitor information that identifies what programming is available, ...	Page 28 lines 26-27.
			Meter-monitor segments contain meter information and/or monitor information.	Page 49 lines 26-27.

229. A method of processing signals to control a mass medium programming presentation comprising the steps of:	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming ...
receiving a programming signal containing mass medium programming and	Column 10 lines 30-39.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV	Page 324 lines 23-31.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic

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communicating said programming signal to a storage device;	Column 10 lines 40-43.	demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions. All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, ...		Page 324 lines 31-35.	programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire to a conventional matrix switch, 75, well known in the art, that outputs to one or more recorder/players, 76 and 78, ...
receiving at least a first downloadable instruction which is	Column 10 lines 30-39. Column 4 lines 5-6. Column 11 lines 38-39.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions. These techniques employ signals embedded in programs. By comparing identification signals on the incoming programming ...		Page 324 lines 23-31. Page 13 lines 25-26. Page 327 line 35 to page 328 line 13.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. The present invention employs signals embedded in programming. Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74,

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effective at a user station to control a processor and	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.	Page 84 lines 26-28.	and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 28 lines 26-27.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...
			Page 49 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 435 lines 16-18.	Meter-monitor segments contain meter information and/or monitor information.
			Page 267 lines 20-28 from example #5.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
			Page 268 line 28 to page 269 line 12 from example #5.	In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of

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a first code or datum to serve	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.
	Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 32 to page 15 line 2.
as evidence of the	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 31 line 30 to page 32 line 6.
	Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be	Page 31 line 30 to page 32 line 1.
		decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of a available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--information--continues to be called by its together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)	
		(The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ...	
		The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	
		Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...	
		Buffer/comparator, 14, receives signal information that is meter information and/or	

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	Column 8 lines 46-50.	passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.		monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...
		The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.	Page 33 lines 18-20.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...
			Page 273 lines 4-6.	The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.
passing of said at least a first downloadable instruction to said processor or			Page 273 lines 21-25.	... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.
of the functioning of said processor in response to said at least a first downloadable instruction;	Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
	Column 7 lines 50-60.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 31 lines 10-22.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects,

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				assembles, and transfers the appropriate information to buffer/comparator, 14.
communicating said at least a first downloadable instruction and said first code or datum to said storage device; and	Column 10 lines 40-43.	All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, ...	Page 324 lines 31-35.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire to a conventional matrix switch, 75, well known in the art, that outputs to one or more recorder/players, 76 and 78, ...
storing said at least a first downloadable instruction and said first code or datum at said storage device in association with said mass medium programming.	Column 11 lines 64-65.	... instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 15-16.	... to cause said selected recorder, 76 or 78, to turn on and record programming, ...
	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.

230. The method of claim 229, wherein said mass medium programming comprises video, audio, or text, said method further comprising one of the steps of:	Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
			Page 435 lines 16-25.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM

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				<p>message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13;...</p>	<p>Page 436 line 9 to page 437 line 3.</p> <p>Page 439 lines 14-15.</p>	

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	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
	Column 18 lines 48-55.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200. The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	Page 420 line 21 to page 421 line 7.	Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions. The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200. Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit- News-Item SPAM message ... In due course, said remote news-service-A station ...
	Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)

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embedding said at least a first downloadable instruction in a television or radio signal;	<p>Column 4 lines 5-9.</p> <p>Column 16 lines 25-32.</p>	<p>These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. ...</p> <p>One particular advantage of these methods for monitoring programming is that, by locating the identifier signals in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded on video cassette recorders and on how people replay such recordings.</p>	<p>Page 13 lines 25-28.</p> <p>Page 319 lines 23-30.</p> <p>The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.</p> <p>One particular advantage of these methods for monitoring programming is that, by embedding the SPAM information in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded, for example, on video and audio cassette recorders and on how people replay such recordings.</p>
embedding a second code or datum in said mass medium programming that enables	<p>Column 4 lines 5-9.</p> <p>Column 11 lines 38-39.</p>	<p>These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. ...</p> <p>By comparing identification signals on the incoming programming ...</p>	<p>Page 13 lines 25-28.</p> <p>Page 327 line 35 to page 328 line 13.</p> <p>The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.</p> <p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74,</p>

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				and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...
			Page 28 lines 26-27.	... monitor information that identifies what programming is available , ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ...		Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ...
Column 19 lines 14-15.	... pass all program and channel identifiers on all programming being cablecast on the multi-channel system.		Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C ...
			Page 248 lines 22-26 from example #5.	Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.
			Page 250 lines 13-16 from example #5.	Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...

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		<p>Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter- monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to</p>	<p>Page 252 lines 15-35 from example #5.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 436 line 9 to page 437 line 6.</p>
a processor or computer to	Column 19 lines 20-25.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is	

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		being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...		<p>the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p>
			Page 439 lines 9-15.	
			Page 295 lines 6-8.	
			Page 439 lines 9-15.	

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receive or output information to supplement said mass medium programming in accordance with said at least a first downloadable instruction;	Column 20 lines 59-67.	(An alternate method for transmitting the recipe to printer, 221, would be for the recipe, itself, to be located in encoded digital form in the programming transmission recieved by TV set, 202.	<p>Page 476 line 34 to page 477 line 3,</p> <p>Page 473 lines 3-13.</p> <p>Page 469 line 35 to page 470 line 17</p> <p>Page 473 lines 14-15.</p> <p>Page 473 lines 26-28.</p> <p>Page 478 lines 1-5.</p>	<p>...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and ...</p> <p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe-and-shopping-list instructions ...</p> <p>The program originating studio ... transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." ...</p> <p>At the station of Fig. 7 and 7F ..., apparatus is caused to receive ... said program ... at a tuner, 215, and ... monitor, 202M; ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...</p> <p>Automatically, said controller, 39, of decoder, 145, transfers said message to the controller, 39, of decoder, 203.</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p>
		<p>In this case, decoder, 203, would identify the signals conveying the recipe</p> <p>and transfer them via processor, 204, to signal processor, 200,</p> <p>which would decrypt them, itself,</p> <p>and transfer them, via means which in</p>		

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		this case it would have, to printer, 221).	Page 474 lines 33-35.	... shopping list at particular shopping-list memory; and outputs output information of said specific recipe and list to printer, 221.
communicating a program unit identification code to said storage device and	Column 11 lines 57-64.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...	Page 329 line 2-20.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
storing said program unit identification code at a storage location associated with said mass medium programming;	Column 11 lines 64-65.	... instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 15-16.	... to cause said selected recorder, 76 or 78, to turn on and record programming. ...
	Column 16 lines 25-32.	One particular advantage of these methods for monitoring programming is that, by locating the identifier signals in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional	Page 319 lines 23-30.	One particular advantage of these methods for monitoring programming is that, by embedding the SPAM information in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette

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		video cassette recorders, these methods provide techniques for gathering statistics on what is recorded on video cassette recorders and on how people replay such recordings.		recorders, these methods provide techniques for gathering statistics on what is recorded, for example, on video and audio cassette recorders and on how people replay such recordings.
communicating to and storing at said storage device said second code or datum to be processed at a user station	Column 11 lines 57-64.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...	Page 329 line 2-20.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor

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to evidence an				<p>information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p> <p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information</p>
			Page 84 lines 26-28.	
			Page 28 lines 26-27.	
			Page 49 lines 26-27.	
	Column 15 lines 57-60.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each.	Page 315 lines 20-24.	
			Page 44 lines 26-32.	
			Page 49 line 26 to page 50 line 20.	

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availability, use, or usage of said mass medium programming;	Column 18 lines 29-41.	FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.	Page 28 lines 26-27.	include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... monitor information that identifies what programming is available, ...
			Page 411 lines 10-11.	In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, ...
			Page 88 lines 19-22.	... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.
		TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,	Page 408 lines 18-29.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.
			Page 414 lines 13-27.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.
			Page 15 lines 16-22.	The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections.

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				The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...
	The processors, 204 and 210, transfer this information to signal processor, 200,		Page 36 lines 32-33.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.
			Page 38 lines 11-14.	Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.
			Page 411 lines 10-15.	... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.
			Page 418 line 23 to page 419 line 15.	Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.
	for recording and subsequent transmission to a remote data collection site.		Page 411 line 28 to page 412 line 2.	In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and

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			<p>causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in ...</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p>	
			<p>Page 173 line 30 to page 174 line 23 from example #3.</p> <p>Page 419 lines 4-15.</p> <p>Page 28 lines 25-35.</p>	
		<p>Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.</p>		

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			Page 397 lines 17-20.	Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...
storing at said storage device	Column 19 lines 23-27.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...	Page 437 lines 1-6.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... ... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,.... ... controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
a second instruct signal which is effective at a	Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio	Page 439 lines 9-15.	At this point, an instruction signal is generated at said program originating studio, embedded

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user station to select said mass medium programming.		originating the programing and is transmitted in the programing transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 37 line 26 to page 38 line 8.	in the programming transmission, and transmitted. Said signal is identified by decoder, 203, transferred to microcomputer, 205; ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...
			Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
			Page 451 line 3.	And the Fig. 1C combining is displayed.

231. The method of claim 229, further comprising the step of storing some	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message
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information at said storage device to					information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
evidence an availability, use, or usage of said at least a first downloadable instruction, said evidence information designating or identifying one or more of:	Column 18 lines 29-41.			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...
				Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
				Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
			FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.	Page 411 lines 10-11.	In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, ...
				Page 88 lines 19-22.	... monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.
			TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the	Page 408 lines 18-29.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the

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	programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,			<p>"program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p>	
				<p>Page 414 lines 13-27.</p>	
				<p>Page 15 lines 16-22.</p>	
				<p>Page 36 lines 32-33.</p>	
				<p>Page 38 lines 11-14.</p>	
	The processors, 204 and 210, transfer this information to signal processor, 200,			<p>Page 411 lines 10-15.</p>	

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				Page 418 line 23 to page 419 line 15.	Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.
	for recording and subsequent transmission to a remote data collection site.			Page 411 line 28 to page 412 line 2.	In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in ...
				Page 173 line 30 to page 174 line 23 from example #3.	The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1 st monitor information (#3).")
				Page 419 lines 4-15.	In the fashion described above, receiving said third transmission of monitor information ...

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			Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.	Page 28 lines 25-35.	causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission. [Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
				Page 397 lines 17-20.	Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...
(1) a mass medium program;	Column 16 lines 32-35.	For example, a person might instruct video cassette recorder, 135, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.		Page 319 lines 30-33.	For example, a subscriber might instruct video recorder/player, 217, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.
(2) a use of programming;	Column 18 lines 30-35.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...		Page 408 lines 18-29	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion.

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				Page 414 lines 13-27	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44. The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above. Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.
				Page 15 lines 16-22	
				Page 411 lines 10-15	
				Page 418 line 23 to page 419 line 15.	
(3) a transmission station;	Column 15 lines 60-62.	[The signals for which the decoders are monitoring] may identify networks,		Page 49 lines 26-28.	Meter-monitor segments contain meter information and/or monitor information.

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			broadcast stations, channels on cable systems, and possibly times of transmission.		Examples of categories of such information include: ... origins of transmissions (eg., network so source stations, broadcast stations, cable head end stations); dates and times ...
(4)	a receiver station;	Column 11 lines 30-31.	... transmit each program unit to cable field distribution system, 93.	Page 326 line 35 to page 327 line 2. Page 328 line 13.	... each program unit, ... the station should transmit the unit, transmit the programming of each received program unit.
(5)	a network;	Column 16 lines 32-35.	For example, a person might instruct video cassette recorder, 135, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.	Page 319 lines 30-33.	For example, a subscriber might instruct video recorder/player, 217, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.
(6)	a broadcast station;	Column 15 lines 60-62.	[The signals for which the decoders are monitoring] may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Page 49 lines 26-28. Page 50 lines 1-4.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... origins of transmissions (eg., network so source stations, broadcast stations, cable head end stations); dates and times ...
(7)	a channel on a cable system;	Column 16 lines 35-41.	Recorder, 135, might receive the programming over Manhattan Cable TV channel 4 and record the programming from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each discrete bit of this information could be conveyed to recorder, 135, in a signal unit or units in the programming so received and recorded.	Page 319 line 33 to page 320 line 8.	Recorder, 217, might receive the programming over Manhattan Cable TV channel 4 and record the programming at the time of original broadcast transmission--from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each discrete bit of this information could be transmitted to the subscriber station of Fig. 5 in meter-monitor information ... embedded in the transmitted programming. So embedding and transmitting said meter-monitor information would cause recorder, 217, to record said information.
(8)	a time of	Column 15 lines 60-62.	[The signals for which the decoders are	Page 49 lines 26-28.	Meter-monitor segments contain meter

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transmission;			monitoring] may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Page 50 lines 1-4.	information and/or monitor information. Examples of categories of such information include: ... origins of transmissions (eg., network so source stations, broadcast stations, cable head end stations); dates and times ...
(9) an instruct signal;	Column 15 lines 57-60.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each.		Page 315 lines 20-24. Page 44 lines 26-32.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned. Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below. Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... monitor information that identifies what programming is available, ...
(10) a source or supplier of data;	Column 15 lines 63-65.	In the case of data transmitted to the micro-computer, [the signals for which the decoders are monitoring] may be unique codes that identify the source and suppliers of the data.		Page 49 line 26 to page 50 line 20. Page 28 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... monitor information that identifies what programming is available, ...

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		16, via telephone to a remote site, that site can determine for billing purposes that the recipe was, first, ordered and, second, delivered.		
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232. The method of claim 229, said method further comprising the steps of: selecting one of: (1) a datum that identifies a unit of computer software in said programming signal;	Column 3 lines 6-8. Column 19 lines 46-48.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. ... several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 14 line 35 to page 15 line 2. Page 23 line 35 to page 24 line 4. Page 37 line 26 to page 38 line 8	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
(2) a datum that designates an addressed apparatus;	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.

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	Column 4 lines 26-28.	Signals may also be transmitted on frequencies outside the ranges of television and radio.	Page 14 lines 15-17. Page 463 lines 10-29.	<p>In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming....</p> <p>(To minimize the risk that program instruction sets may become separated from their associated television programming, said sets are normally embedded in their associated television transmissions. But it is not an absolute requirement of the preferred embodiment that all program instruction sets be so embedded. If the volume of program instruction set information that a given programming transmission must transmit exceeds the transmission capacity of said transmission [eg., if the audience includes viewers who do not have overlay capacity and would see "snow" were set information transmitted in portions of the transmission obscured by overlays], at the proper time transmission stations can transmit said set information outside the conventional transmission [a program originating studio may transmit said set information, for example, in a satellite side lobe of the transponder transmission transmitting the conventional transmission, and a cable head end intermediate transmission station transmits it in a separate television channel or in a transmission in a multiplexed FM frequency spectrum transmission].)</p> <p>The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...</p>
	Column 17 lines 39- 44.	Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed, and transfer such signals to such equipment as directed.	Page 15 lines 16-23.	

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			Page 34 lines 24-26. Page 44 lines 14-15. Page 95 lines 18-21.	... identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus ... A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ... Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205.
(3) a datum that is part of a decryption code;	Column 3 lines 3-5. Column 13 lines 31-32.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. The signal or signals may transmit a code or codes necessary for the decryption of the transmission.	Page 14 lines 32-35. Page 292 lines 7-11. Page 54 lines 2-6. Page 294 lines 28-35.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Receiving said message causes controller, 20, to load the enable-CC13 instructions and the enable-WSW instructions of the information segment of said message at particular RAM of controller, 20, and execute said instructions as the machine language instructions of one job. An information segment can transmit any information that a processor can process. It can transmit compiled machine language code or assembly language code or higher level language programs, all of which are well known in the art. Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions. Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the

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(4) a comparison datum that designates a communication schedule; and	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming with the programming schedule ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 295 line 27 to page 296 line 2.	cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission,.... ... thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio). Automatically, controller, 20, selects information of cipher key Ca from among the information of said portion; transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio information, using said key information and selected decryption cipher algorithm C, and outputting decrypted information of the audio portion of the "Wall Street Week" program....

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			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
embedding said selected one in said programming signal.	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.
	Column 9 lines 31-33.	A digital signal is embedded by conventional generating and encoding means and transmitted in a television, radio or other transmission.	Page 22 lines 1-6.	... a first series of control instructions is generated, embedded sequentially on said line or lines of the vertical interval, and transmitted on the first and each successive frame of said television program transmission, signal unit by signal unit and word by word, until said series has been transmitted in full.
			Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
			Page 36 lines 2-3.	... processes signal information embedded in an inputted radio frequency.
			Page 36 lines 19-20.	... processes signal information embedded in a frequency other than a television or radio frequency.
233. The method of claim 229, further comprising the steps of: selecting a second	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted

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downloadable instruction, said second downloadable instruction being one of:		<p>into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p>	
(1) a switch control instruction;	Column 11 lines 38-39.	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...</p>	<p>Page 59 lines 29-33</p> <p>Page 327 line 35 to page 328 line 13.</p> <p>Page 84 lines 26-28.</p>

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		Reference	Language	Reference	Language
				Page 28 lines 26-27. Page 49 lines 26-27.	... monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information.
(2) a timing control instruction;	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...		Page 327 line 35 to page 328 line 13. Page 84 lines 26-28. Page 28 lines 26-27. Page 49 lines 26-27.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information.
(3) a locating control signal;	Column 14 lines 54-55.	If signal processor, 112, has been preprogrammed with the signal or signals ...		Page 298 line 33 to page 299 line 1.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba.

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Claim Language	Reference	Language	Reference
Column 14 lines 54-61.	<p>If signal processor, 112, has been preprogrammed with the signal or signals</p> <p>or if it has been informed of the predetermined fashion for identifying and processing the the needed signal or signals in the incoming transmission from facility, 113,</p> <p>for example, where to look for the signals</p>	<p>At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba.</p> <p>In example #7, the controller, 20, of the signal processor, 200, of Fig. 4 is preprogrammed at a particular time with particular information that indicates that the subscriber of said station wishes to view said "Wall Street Week" program when transmission of said program on cable cable 13 commences. ... Receiving any given instance of please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to select particular WSW-on- CC13-at-particular-8:30 information in said received information, record said selected information at particular memory, and execute particular receive-authorizing-info-at- appointed-time instructions. ...</p> <p>In a predetermined fashion, executing said instructions causes controller, 20,...</p> <p>...causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200,....</p> <p>Executing said 1st-stage-enable-WSW-program instructions causes controller, 20,...</p> <p>At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba. ...</p>	<p>Page 298 line 33 to page 299 line 1.</p> <p>Page 289 line 22 to page 290 line 10.</p> <p>Page 290 lines 11-12.</p> <p>Page 290 lines 26-30.</p> <p>OR Page 298 lines 17-18.</p> <p>Page 298 line 34 to page 299 line 1.</p>

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		and when	Page 290 lines 11-17. OR Page 297 lines 20-21. and how, lines 21-26. Page 291 lines 21-28.	<p>In a predetermined fashion, executing said instructions causes controller, 20, causes prepare to receive a particular enabling SPAM message at a particular time. Automatically, controller, 20, checks the time of the clock, 18, of signal processor, 200, periodically. At a particular commence-enabling time that is a predetermined interval prior to the aforementioned 8:30 PM time....</p> <p>Subsequently, but still in the interval between said commence-enabling time and said 8:30 PM time, ...</p> <p>In a predetermined fashion, executing said instructions causes controller, 20,....</p> <p>....transmits particular preprogrammed enable-next-program-on-CC13 information to the control processor, 39J, of said decoder, 30, and causes said control processor, 39J, to place one instance of said information at a particular controlled-function-invoking information location; causes the oscillator, 6,....</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, select the information of the execution segment in said message, and determine that said selected information matches the aforementioned instance of enable-next-program-on-CC13 information at said particular controlled-function-invoking information location. ...</p> <p>Automatically, controller, 20, selects information of cipher key Ca from among the</p>
	signal processor, 112, can transfer the signal to decryptor/interruptor, 115.		Page 295 line 30 to page 296 line 1.	

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		information of said portion; transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio information, using said key information and selected decryption cipher algorithm C, and outputting decrypted information of the audio portion ...	
		Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258. ...	299 lines 13-18.
	Column 14 lines 46-54.	Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video portion (said information being, as explained above, encrypted digital video), to decrypt said information, ...	Page 299 lines 13-25.
	The signal or signals necessary for the decryption of the channel that box, 114, passes to decryptor/interruptor, 115,	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba ...	Page 298 line 34 to page 299 line 1.
		Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor,	Page 299 lines 13-17.

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			<p>Page 298 line 33 to page 299 line 1.</p> <p>Page 293 line 20.</p> <p>Page 291 lines 10-20.</p> <p>Page 289 lines 25-27.</p> <p>Page 290 lines 28-29.</p> <p>Page 294 lines 28-35.</p>	<p>224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, ...</p> <p>At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba ...</p> <p>...such as, for example, the RAM of controller, 20; ...</p> <p>...said head end is caused, in a predetermined fashion, to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions and ... enable-WSW instructions that include particular enable-WSW-programming information, ... on the frequency of said master control channel. (Hereinafter said message is called the "local-cable-enabling-message (#7).") ...</p> <p>... said "Wall Street Week" program when transmission of said program on cable channel 13 commences. ...</p> <p>...particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system ...</p> <p>Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions.</p> <p>Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission, ...</p>
(4) an instruct-to-	Column 8 lines 58-62.	Control signals can be passed to the	Page 59 lines 29-31.	A SPAM message is the modality whereby

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contact signal that designates a remote receiver station;		<p>apparatus by means of the programming transmissions input at switch, 1, and mixer, 2.</p> <p>An example of such a control signal is an instruction for the apparatus to contact a remote telephone unit.</p>	<p>Page 290 lines 26-31.</p> <p>Page 291 lines 21-24.</p> <p>Page 402 lines 21-26.</p> <p>Page 403 lines 7-12.</p> <p>Page 405 lines 20-29.</p>	<p>the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.</p> <p>... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ...</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...</p> <p>The next day, February 28, 1988 at 2:32 AM, receiving particular time information from said clock, 18, causes said controller, 20, again to cause said switch, 1, and said mixer, 3, to input the transmission of said master channel to said decoder, 30, and to cause said decoder, 30, to commence processing to detect a SPAM end of file signal.</p> <p>Said message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30.</p> <p>Receiving said message causes said controller, 39, to transmit said Read-Meters-of-Selected-Stations SPAM message to the controller, 20, of the signal processor, 200, of said station.</p> <p>Executing said ones causes controller, 20, to transmit the current reading information of utilities meter, 262, to a remote metering station computer and cause said computer to process said information. Automatically,</p>

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(5) an instruct-to-transfer signal that designates a unit of broadcast or cablecast programming;		Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...		controller, 20, ... activates telephone connection, 22; inputs a particular telephone number ...
				Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
				Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...
				Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
(6) an instruct-to-delay signal that designates a unit of broadcast or cablecast programming;		Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
				Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73,

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					<p>determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p>
				Page 84 lines 26-28.	
				Page 28 lines 26-27.	
				Page 49 lines 26-27.	
(7) an instruct-to-decrypt or instruct-to-interrupt signal that designates a unit of programming and a way to decrypt or interrupt;		Column 13 lines 24-25.	The signal or signals instruct decrypter/interrupter, 101, to decrypt the transmission ...	Page 298 lines 10-21.	<p>Receiving the "1st-WSW-program-enabling-message (#7) causes controller, 20, to execute the aforementioned load- and-run-@20 instructions, to load the 1st-stage-enable-WSW-program instructions of the information segment at particular RAM of controller, 20, then to execute the information so loaded as the so-called machine language instructions of one so-called job.</p> <p>Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission.</p>

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(8) an instruct-to-enable or instruct-to-disable signal that designates an apparatus;	Column 20 lines 31-37.	This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form and instruct control means, 226, to activate printer, 221.	Page 471 line 26 to page 472 line 17.	<p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said</p>
			476 line 34 to page 477 line 8.	
			Page 477 lines 8-17.	

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				<p>second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p> <p>... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p>
	Column 20 lines 45-46.	... and all necessary equipment was enabled.	<p>Page 474 lines 3-7.</p> <p>Page 473 line 29 to page 474 line 1.</p>	
(9) an instruct-to-record signal that designates a broadcast or cablecast program;	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	<p>Page 327 line 35 to page 328 line 13.</p>	<p>Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when</p>

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(10) an instruction signal that controls a multimedia presentation;					and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
				Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...
				Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
				Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
(10) an instruction signal that controls a multimedia presentation;		Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 25 line 34 to page 26 line 2.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ...
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...
				Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at ...

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				and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
	Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
			Page 435 lines 16-25.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.

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			Page 436 line 9 to page 437 line 3.	<p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13;...</p> <p>...instructions causes controller, 20, to switch power on to monitor, 202M, ...</p> <p>Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p>
	Column 19 lines 27-28.	... and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on ...	Page 439 lines 14-15. Page 445 line 24 to page 446 line 1.	

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
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(13) an instruct-to-tune signal that designates a receiver or a frequency;	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
	Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands

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		<p>are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p>
	<p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>	

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		Column 19 lines 28-29.	...and tuner, 215, to tune appropriately to "Wall Street Week."	Page 439 lines 14-15. Page 445 line 35 to page 446 line 1. Page 446 lines 17-21.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. ...to receive the transmission of cable channel 13;... ... and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....
(14) an instruct-to-coordinate signal that designates two apparatus;		Column 4 lines 5-6. Column 19 lines 20-29.	These techniques employ signals embedded in programs. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 13 lines 25-26. Page 436 line 9 to page 437 line 6.	The present invention employs signals embedded in programming. Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.

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	<p>Then, in a predetermined fashion, microcomputer, 205, may</p>	<p>Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its</p> <p>...</p> <p>...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217, ...</p> <p>...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.</p> <p>...instructions causes controller, 20, to switch power on to monitor, 202M, ...</p> <p>Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, ...</p> <p>...and to tune monitor, 202M, in a</p>	<p>Page 439 lines 9-15.</p> <p>Page 295 lines 6-8.</p> <p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p> <p>Page 445 line 24 to page 446 line 1.</p> <p>Page 445 line 35 to</p>

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		"Wall Street Week."	page 446 line 1. Page 446 lines 17-21. Page 25 line 33 to page 26 line 2.. Page 37 line 26 to page 38 line 8.	predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ... Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	Column 19 lines 60-66.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, ...		Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV
			Page 26 lines 4-8.	

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(15) an instruct-to-compare signal that designates a news transmission or a computer input;	Column 18 lines 48-55:	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200. The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	Page 420 line 21 to page 421 line 7.	monitor, 202M. Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions. The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200. Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit- News-Item SPAM message ... In due course, said remote news-service-A station ...
(16) an identifier signal that causes a computer to instruct a plurality of tuners each to tune to a broadcast or cablecast transmission;	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. SPAM signals are generated at original
			Page 84 lines 26-28.	

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(17) an instruct-to-coordinate signal that designates two units of multimedia information and one of: (1) an output time and (2) an output place;	Column 19 lines 60 to page 20 line 2.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.		Page 28 lines 26-27.	transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions monitor information that identifies what programming is available, ...
				Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
				Page 25 line 34 to page 26 line 2. Page 37 line 26 to page 38 line 8.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; ... In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...
				Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then

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		Column 19 lines 31-34.	FIG 6C can also illustrate how programing delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	<p>Page 451 line 3.</p> <p>Page 18 lines 24-27.</p> <p>page 450 line 27 to page 451 line 11.</p>
			<p>displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.</p> <p>And the Fig. 1C combining is displayed.</p> <p>Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.</p> <p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p> <p>Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed.</p> <p>But the combining of Fig. 1C is just part of a larger process.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p>	
(18)	an instruct-to-generate signal that	Column 19 line 60 to column 20 line 1.	At this point, an instruction signal is generated in the television studio	Page 25 line 34 to page 26 line 2.

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		Reference	Language	Reference	Language
designates an output datum;		<p>originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p>		<p>in the programming transmission, and transmitted. Said signal is identified by decoder, 203, transferred to microcomputer, 205;</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>	
		<p>This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204.</p> <p>The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>		<p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic. And microcomputer, 205, commences ...</p>	
(19) an instruct-to-transmit signal that designates a computer output;	Column 19 line 60 to column 20 line 1.	<p>At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission. This signal is identified by decoder, 203,</p>	<p>Page 25 line 34 to page 26 line 2.</p>	<p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203, transferred to microcomputer,</p>	

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	overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	page 38 line 8.	receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...
		Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
		Page 451 line 3.	And the Fig. 1C combining is displayed.
(21) an instruct- that-if signal that designates a function to perform if a predetermined condition exists;	Column 20 lines 27-36. Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal

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			<p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,</p> <p>instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...</p>	<p>Page 476 line 34 to page 477 line 8.</p> <p>Page 477 lines 8-17.</p>	<p>processor, 200.</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause an instance of ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p>
(22) an instruct-to-enable-and-deliver signal that designates information that supplements a television program;	Column 19 lines 63-66.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the	

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					graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...
(23) an instruct-to-transmit signal that designates a computer peripheral device;	Column 19 lines 63-66.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,	Page 37 line 26 to page 38 line 8.	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be

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(24) a code signal that designates a datum to remove or embed; and		Column 12 lines 35-41.	The cable head end facility also contains signal strippers, 81, 85, and 89, of which models exist well known in the art, that controller/computer, 73, can instruct to remove signals from programming as required, and signal generators, 82, 86, and 90, also well known in the art, that controller/ computer, 73, can instruct to add signals to programming as required.	Page 354 lines 18-24.	required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...
(25) a signal addressed to a receiver station apparatus; and		Column 18 lines 1-7.	Decoder, 203, transfers all received signals to processor or monitor, 204, which identifies the signals as addressed to microcomputer, 205, and transfers them to microcomputer, 205. Microcomputer, 205, uses such received signals, in a predetermined fashion, to govern the operation of furnace, 206, air conditioning system, 207, and window opening and closing means, 208.	Page 400 lines 3-4. Page 35 lines 11-15. Page 35 lines 24-27. Page 35 lines 28-31.	Fig. 6 shows signal strippers, 81, 85, and 89, of which models exist well known in the art, that computer, 73, can cause to remove SPAM information from programming as required, and signal generators, 82, 86, and 90, also well known in the art, that computer, 73, can cause to embed SPAM information as required. Receiving said Weather-Bulletin-125 SPAM message causes decoder, 203, to the overall video transmission and passes said information to a digital detector, 34, which acts to detect the digital signal information embedded in said information, using standard detection techniques well known in the art, and inputs detected signal information to controller, 39, which... ... said audio information that is of interest. The digital detector, 37, detects signal information embedded in said audio information and inputs detected signal information to controller, 39. ... separately defined transmission to a digital detector, 38, which detects signal information embedded in any other information portion of said television channel signal and inputs detected signal information to controller, 39.

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			Page 400 lines 6-18. See Fig. 3A regarding the composition of controller 39.	Automatically, control processor, 39J, executes particular preprogrammed Weather-Bulletin controlled function instructions that cause said control processor, 39J, to ... to input the information of the information segment of said message to the CPU of microcomputer, 205; ... and to cause said CPU to execute the information so inputted as a machine language job.
			Page 37 line 28 to page 38 line 8.	Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			Page 400 lines 19-22.	So executing said information causes microcomputer, 205, to reducing the power usage of said air conditioning system, 207, causes any open windows at said station to be closed.
			Page 401 lines 14-17.	In this fashion, SPAM messages can control and regulate the operation of individual subscriber station controlled apparatus (the thermostat control of furnace, 206, for example, could be similarly controlled) ...
embedding said selected second downloadable instruction in said programming signal.	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.

234.	A method of	Column 11 lines 39-43.	... the programming schedule received	Page 328 lines 9-13.	... said message information with information
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controlling a remote transmitter station to deliver a receiver specific output at a receiver station and controlling said receiver station to	earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming. Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form	Column 20 lines 27-37.	<p>of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered- information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200.</p> <p>Receiving said message causes controller, 20, to load and execute said check-for- entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause an instance of ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said</p>	<p>Page 326 lines 28-30.</p> <p>Page 471 line 26 to page 472 line 17.</p> <p>Page 476 line 34 to Page 477 line 8.</p>

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communicate one or more receiver specific data to a remote data collection station,				Page 477 lines 8-17.	decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station. In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission.... ... instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of Figs. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221 ...
		and instruct control means, 226, to activate printer, 221.		Page 474 lines 3-7.	[Signal processor 200 in Fig.7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
	communicate one or more receiver specific data to a remote data collection station,	Column 20 lines 54-56.	... when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site, ...	Page 28 lines 25-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber
with said receiver station being remote		Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or	Page 390 lines 30-35.	

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from			office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.		station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
said remote transmitter station and	Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. FIGS. 3A, 3B, and 3C illustrate the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.		Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
said remote data collection station being remote from said receiver station, said method comprising the steps of:	Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.		Page 324 lines 18-21.	Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
				Page 33 lines 18-20.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...
				Page 273 lines 4-6.	The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.
				Page 273 lines 21-25.	... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.
(1) receiving at the remote transmitter station	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.		Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions

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one or more instruct signals which operate at the receiver station to control a receiver station apparatus and	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...	Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
	<i>In General</i> Column 17 lines 39- 44.	Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed , and transfer such signals to such equipment as directed .	The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...	<i>In General</i> Page 15 lines 16-23.	The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...
			... identifies the particular apparatus to which said signals are addressed , and outputs said signals to said apparatus ...	Page 34 lines 24-26.	... identifies the particular apparatus to which said signals are addressed , and outputs said signals to said apparatus ...
			A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ...	Page 44 lines 14-15.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ...
			Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205.	Page 95 lines 18-21.	Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205.
	<i>Specifically</i> Column 20 lines 29-30.	... which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.	... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20.	<i>Specifically</i> Page 472 lines 4-12.	... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20.
			In each decoder, the controller, 39, 44, or 47, receives detected digital information from the	Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the

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a first code or datum to	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ... The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 lines 27-29. Page 14 line 32 to page 15 line 2.	relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. (The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ... The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
serve as evidence of the passing of said one or more instruct signals to a controllable device	Column 20 lines 27-29. Column 20 lines 42-45.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ... Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer ...	Page 471 line 35 to page 472 line 1. Page 472 lines 23-27.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
or of the functioning of said controllable apparatus in response to said one or more instruct signals;	Column 20 lines 29-30.	... which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.	Page 472 lines 4-12. Page 37 line 26 to page 38 line 8.	... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43,

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		Column 20 lines 45-46.	... and all necessary equipment was enabled.	Page 473 line 29 to page 474 line 1.	and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
(2) receiving a control signal which operates at the remote transmitter station to control the communication of at least one of said one or more instruct signals and		Column 11 lines 39-43.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 328 lines 9-13. Page 326 lines 28-30.	... said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit. ... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.
		Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to

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communicating said control signal to said remote transmitter station;	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 471 line 35 to page 472 line 1.	The present invention employs signals embedded in programming. At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
	Column 20 lines 37-39.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200, ...	Page 477 lines 8-23.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating
			Page 281 lines 1-6.	By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")
	Column 11 lines 39-41.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, ...	Page 328 lines 9-10.	... with information of the programming schedule, received earlier from input, 74, and/or network, 98, ...
			Page 326 lines 28-30.	... receiving input information from local

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(3) receiving a second code or datum designating a specific one of said one or more instruct signals to be transmitted by the remote transmitter station, and said transmitter station	Column 11 lines 18-21.	The controller/computer, 73, has means for receiving input information from local input, 74, and from remote sources via telephone or other data transfer network, 98.	input, 74, and from remote stations via telephone or other data transfer network, 98.	Page 326 lines 27-30.	Computer, 73, has means for receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.
	Column 11 lines 21-24.	Such input information might include the cable television system's complete programming schedule, with each discrete unit of programming identified with a unique program code ...	Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.	Page 326 lines 30-33.	Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information.
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.
			By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.	Page 84 lines 26-28.	By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...	Page 28 lines 26-27.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...
			... monitor information that identifies what		... monitor information that identifies what

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transferring said designated specific instruct signal to a transmitter; and	Column 11 lines 50-57.	... if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 49 lines 26-27. Page 328 line 22 to page 329 line 1.	programming is available, ... Meter-monitor segments contain meter information and/or monitor information. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.	
	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.	
	Column 20 lines 27-29.	... a signal is identified in the incoming programing on TV set, 202, by decoder, 203, ...	Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...	
	Column 20 lines 37-39.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200, ...	Page 477 lines 8-23.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating	

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				Page 281 lines 1-6.	By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")
(4) transmitting from said remote transmitter station an information transmission comprising	Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, ...		Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, ...
one or more designated instruct signals, said one or more instruct signals being transmitted	Column 20 line 27.	Five minutes later, ...		Page 471 lines 26-28.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message ...
	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...		Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
at one or more specific times or on one or more specific channels	Column 20 lines 37-39.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200, ...		Page 477 lines 8-23.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating

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in accordance with said control signal.		Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 281 lines 1-6.	By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")
		Column 11 lines 39-43.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...
				Page 328 lines 9-13.	... said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
				Page 326 lines 28-30.	... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.
235. A method of processing signals		Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
at a receiver station, said method comprising the steps of:		Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming

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		of co-ordinated presentations that the signal apparatus and methods described here can permit.			such as television or radio is displayed to persons. Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
receiving an information transmission at a receiver station, said information transmission containing television programming and	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Childs's "The French Chef" is one such program.	Page 470 lines 1-3 and Page 470 lines 9-12.	... transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...	
	Column 4 lines 5-6. Column 20 lines 27-29.	These techniques employ signals embedded in programs. ... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 470 lines 19-21. Page 13 lines 25-26. Page 471 line 35 to page 472 line 1.	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M. The present invention employs signals embedded in programming.	
	Column 20 lines 37-39.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200, ...	Page 477 lines 8-23.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ... In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular covert control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due course, said programming originating	
a plurality of embedded signals;			Page 281 lines 1-6.	By themselves, the first and second features provide a technique whereby a message such	

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				as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")
detecting and identifying at least one of said plurality of embedded signals in said information transmission;	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1. Page 438 lines 13-15.	This base band signal is then transferred through separate paths to three separate detector devices. ... causing the apparatus of decoder, 30, to commence identifying and processing the individual SPAM messages embedded in said transmission.
			Page 59 lines 29-33.	A SPAM message is the modality whereby the original transission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transission consists of a series or stream of sequentially transmitted SPAM messages.
selecting a controllable receiver station apparatus based on information within said at least one identified embedded signal;	Column 17 lines 39- 44.	Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed, and transfer such signals to such equipment as directed.	Page 15 lines 16-23. Page 34 lines 24-26.	The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; identifies the particular apparatus to which

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	Column 20 lines 29-30.	... which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.	<p>Page 44 lines 14-15.</p> <p>Page 95 lines 18-21.</p> <p>Page 472 lines 4-12.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>said signals are addressed, and outputs said signals to said apparatus ...</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ...</p> <p>Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205.</p> <p>... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>
passing said at least one identified embedded signal to or	Column 20 lines 29-30.	... which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.	<p>Page 472 lines 4-12.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>

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within at least	Column 7 lines 39-49.	In a pre-determined fashion, buffer/comparator, 8, identifies signal words and/or signal units that must be decrypted, either in whole or in part, and passes identified signal words and/or units to decrypter, 10. Decrypter, 10, uses conventional decrypter techniques, well known in the art, in a pre-determined fashion to decrypt such signals as required. Decrypter, 10, then passes the decrypted signals to processor or monitor, 12. Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 21-26. Page 30 line 31 to page 31 line 1.
one reprogrammable device at said receiver station;	Column 4 lines 55-56. Column 5 lines 16-20.	The present invention contemplates signal processing apparatus ... [The apparatus] has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions.	Page 30 lines 29-30. Page 15 lines 7-8. Page 16 lines 6-10.
controlling said controllable receiver station apparatus based on instructions within said at least one identified embedded signal; and	Column 20 lines 31-36.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information	

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storing information evidencing said step of controlling.	Column 20 lines 49-54.	Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via	<p>Page 476 line 34 to page 477 line 8.</p> <p>Page 477 lines 8-17.</p>	<p>invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...</p>
			Page 473 line 29 to page 474 line 1	<p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at</p>

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		processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received.		microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above. At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.
			Page 314 line 30-33.	

236. The method of claim 235, wherein said step of storing comprises storing some information that evidences a function performed by or	Column 7 lines 50-60.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 31 lines 10-22.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.
initiated by said controllable receiver station apparatus	Column 20 lines 33-36.	... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...	Page 476 line 34 to page 477 line 8.	(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said

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in consequence of said at least one identified embedded signal having been passed to said controllable receiver station apparatus.	Column 20 lines 29-30.	... which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.	Page 477 lines 8-17.	<p>second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....</p> <p>... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>
			Page 472 lines 4-12.	
			Page 37 line 26 to page 38 line 8.	

237. The method of claim 235, wherein said stored information evidences one from the group consisting of:	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 31 line 30 to page 32 line 6.	<p>Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16,</p>
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			<p>Page 411 lines 10-15</p> <p>Page 418 line 23 to page 419 line 15.</p> <p>Page 411 line 28 to page 412 line 2.</p> <p>Page 173 line 30 to page 174 line 23 from example #3.</p>	<p>transferring said signal to all said apparatus.</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said</p>

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(b) a result of processing performed by said controllable receiver station apparatus;				Page 419 lines 4-15.	SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1 st monitor information (#3).")
				Page 28 lines 25-35.	In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.
					[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
			This signal indicates that the recipe, itself, has been received.	For example, Page 473 line 29 to page 474 line 1	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
		For example, Column 20 lines 53-54.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to	With respect to Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in

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	<p><i>And</i> Column 20 lines 31-36.</p>	<p>Fig. 1), of signal processor, 200, ...</p> <p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...</p>	<p><i>And</i> Page 471 line 26 to page 472 line 17.</p>	<p>the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p>

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(c) an identification of programming processed by said controllable receiver station apparatus;				Page 477 lines 8-17.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...
		<i>For example,</i> Column 15 lines 52-56.	If a unit like the microcomputer can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.	<i>For example,</i> Page 317 lines 2-6.	If a given intermediate or output apparatus can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.
		Column 15 lines 57-60.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each.	Page 315 lines 20-24.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
				Page 44 lines 26-32.	Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.
				Page 49 line 26 to	Meter-monitor segments contain meter information and/or monitor information.

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				page 50 line 20.	Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data.
				Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
				<i>With respect to</i> Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
				Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
				Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
				Page 24 lines 5-6.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to ...
				Page 451 lines 7-9.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to ...
				<i>And</i> Page 451 line 3.	And the Fig. 1C combining is displayed.
				Page 26 lines 8-11.	TV monitor, 202M, then displays the image

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					shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
(d) a time or date of a function performed by said controllable receiver station apparatus;	Column 16 lines 35-41.	Recorder, 135, might receive the programming over Manhattan Cable TV channel 4 and record the programming from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each discrete bit of this information could be conveyed to recorder, 135, in a signal unit or units in the programming so received and recorded.	Page 319 line 33 to page 320 line 8.	Recorder, 217, might receive the programming over Manhattan Cable TV channel 4 and record the programming at the time of original broadcast transmission--from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each discrete bit of this information could be transmitted to the subscriber station of Fig. 5 in meter-monitor information ... embedded in the transmitted programming. So embedding and transmitting said meter-monitor information would cause recorder, 217, to record said information.	
(e) an input received by said controllable receiver station apparatus;	Column 20 line 49-52.	Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16.	Page 473 line 29 to page 474 line 1	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.	
			Page 314 line 30-33.	At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.	
(f) a source of input to said controllable receiver station apparatus;	For example, Column 15 lines 63-65.	In the case of data transmitted to the micro-computer, [the signals for which the decoders are monitoring] may be unique codes that identify the source and suppliers of the data.	For example, Page 49 lines 26-28. Page 50 lines 19-20.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: unique codes that identify the sources and suppliers of computer data.	

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(g) a device controlled by said controllable receiver station apparatus;	<p>When the transmission of the recipe ...</p> <p>[a signal word] ... which in a predetermined fashion, signal processor, 200, decrypts and transfers ...</p>	<p>For example, Column 20 lines 46-47.</p> <p>Column 20 lines 39-41.</p> <p>Column 20 lines 41-42.</p>	<p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe-... instructions ...</p> <p>... the information of said segments is encrypted prior to transmission...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111"</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p>
(h) a step of decrypting or otherwise enabling a presentation;	<p>... to decrypter, 224, for decryption ...</p>	<p>Column 20 lines 47-48.</p>	<p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p>

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	Column 20 lines 45-46.	... and all necessary equipment was enabled.	Page 473 line 29 to page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe - ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
	Column 20 lines 39-41.	[a signal word] ... which in a predetermined fashion, signal processor, 200, decrypts and transfers ...	Page 282 line 2 to page 283 line 33.	... the information of said segments is encrypted prior to transmission ... The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ... Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111"
(i) an output device of said receiver station; and	Column 18 lines 35-36.	The processors, 204 and 210, transfer this information to signal processor, 200, ...	Page 411 lines 10-15.	... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.
			Page 418 line 23 to page 419 line 31	Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent

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			<p>Page 36 lines 32-33.</p> <p>Page 38 lines 11-14.</p> <p>Page 173 line 30 to page 174 line 23.</p>	<p>instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")</p>
(j) a time or date of an output at said receiver station.	Column 16 lines 35-41.	Recorder, 135, might receive the programming over Manhattan Cable TV channel 4 and record the programming from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each discrete bit of this information could be conveyed to recorder, 135, in a signal unit or units in the programming so received and recorded.	Page 319 line 33 to page 320 line 8.	Recorder, 217, might receive the programming over Manhattan Cable TV channel 4 and record the programming at the time of original broadcast transmission--from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each discrete bit of this information could be transmitted to the subscriber station of Fig. 5 in meter-monitor information ... embedded in the transmitted programming.

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				So embedding and transmitting said meter-monitor information would cause recorder, 217, to record said information.
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238. The method of claim 235, wherein said at least one identified embedded signal instructs the receiver station to execute a conditional operation of a command signal, said method further comprising the steps of:	Column 20 lines 27-33.	Five minutes later, a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, ...	Page 471 line 26 to page 472 line 17.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ... At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ... Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause ...
determining on the basis of stored information that said command signal is present; and	Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, ...	Page 472 lines 15-17.	... and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...
	Column 20 lines 26-27.	... to hold and process further in a predetermined fashion.	Page 471 lines 22-25.	Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.
	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to	Page 471 lines 14-21.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in

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			Page 477 lines 8-17.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...
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239. The method of claim 238, further comprising the steps of: storing information evidencing a passing of a second of said at least one identified embedded signal to a processor; and	Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.	Page 472 lines 23-27. Page 473 line 29 to page 474 line 1.	...Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information. Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
	Column 20 lines 37-42.	The signal transmission from processor, 204, also passes a signal word to signal processor, 200,	Page 477 lines 8-23.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations ... to cause an instance of particular control information that is in said instruction to be placed at particular control-function-invoking information memory of the controller, 39, of said decoder, 290. In due

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storing information evidencing a function	Column 20 lines 49-54.	which, in a predetermined fashion, signal processor, 200, decrypts and transfers	Page 281 lines 1-6.	<p>course, said programming originating ...</p> <p>By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")</p> <p>... the information of said segments is encrypted prior to transmission ...</p> <p>The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ...</p> <p>Executing said information causes control processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111".</p> <p>(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at</p>
		to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.	Page 282 line 2 to page 283 line 33.	
		Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via	Page 478 lines 1-5.	

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		processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received.		microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 314 line 30-33.	At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.
			Page 473 lines 3-13.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe... instructions ...
			Page 477 lines 12-17.	... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....
			Page 477 lines 23-29.	... causes ... said decoder, 290, to detect and process properly the information of said second message.
			Page 478 lines 1-5.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
			Page 475 lines 1-2.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.

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performed by or initiated by one of a first of said at least one identified embedded signal and	Column 20 lines 26-27.	... to hold and process further in a predetermined fashion.	<p>... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...</p> <p>[when the transmission] ... is received, box 222, transfers the transmission ...</p>	Page 471 lines 22-25.	Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.
	Column 20 lines 33-36.			Page 476 line 34 to page 477 line 8.	(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.
				Page 477 lines 8-17.	In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission....
	Column 20 lines 47.			Page 477 lines 12-17.	...selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....
				Page 477 lines 23-29.	... causes ... said decoder, 290, to detect and

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said second of said at least one identified embedded signal.	Column 20 lines 41-42.	... to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.	Page 478 lines 1-5.	process properly the information of said second message. (Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
	Column 20 lines 47-48.	... to decrypter, 224, for decryption ...	Page 478 lines 1-5.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)

240. The method of claim 235, wherein at least one identified embedded signal instructs the receiver station to perform a function in response to a command signal, said function selected from the group consisting of:	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
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				Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a
				Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
(a) controlling a tuner to tune to a selected programming, data, or command signal transmission;		Column 19 lines 24-25.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X...	Page 295 lines 6-8.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...
				Page 439 lines 9-15.	... to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;...
				<i>With, for example,</i> Page 450 lines 31-32.	... caused his microcomputer, 205, to be preprogrammed as described above; ...
		<i>With, for example,</i> Column 19 lines 42-53.	Microcomputer, 205, is preprogramed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 20-24.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
			When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by	Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
				Page 23 line 35 to	Subsequently, a second series of instructions

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	decoder, 203, and transferred to microcomputer, 205.	page 24 line 4.	is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
	These signals instruct microcomputer, 205,	Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	to generate several graphic video overlays,	Page 24 lines 5-16.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."
	which microcomputer, 205, has the means to generate and transmit and TV set, 202,	Page 451 lines 7-11.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
		Page 19 line 29 to page 20 line 20.	Microcomputer, 205, is a conventional microcomputer system ... for generating

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		has the means to receive and display, and to			computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.
		transmit these overlays to TV set, 202,		Page 26 lines 4-8.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
		upon command.		Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a ...
				Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
		This signal is identified by decoder, 203, and transferred via processor, 204, to		And Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and
	And Column 19 lines 63-66.				

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			microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,		executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...
(b) controlling a switch or transmission device to communicate programming, data, or a command signal from a selected input source to a selected output source;	Column 11 lines 41-43.	... controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 37 line 26 to page 38 line 8.	... computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming ...	
	Column 11 lines 44-46.	Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Page 328 lines 14-16.	Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78,	
	<i>And, for example,</i>	... controller/computer, 73, instructs matrix	<i>And, for example,</i>	In its preprogrammed fashion, so determining	

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	Column 11 lines 54-57.	switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 31 to page 329 line 1.	causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
	<i>With, for example,</i> Column 19 lines 42-53.	Microcomputer, 205, is preprogramed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	<i>With, for example,</i> Page 450 lines 31-32. Page 21 lines 20-24.	... caused his microcomputer, 205, to be preprogrammed as described above; ... Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
		When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 451 lines 6-7. Page 23 line 35 to page 24 line 4.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ... Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
			Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
		These signals instruct microcomputer, 205,	Page 24 lines 5-16.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information

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			<p>of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular</p>
	to generate several graphic video overlays,	Page 451 lines 7-11.	
	which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to	Page 19 line 29 to page 20 line 20.	
	transmit these overlays to TV set, 202,	Page 26 lines 4-8.	
	upon command.	Page 44 lines 14-17.	

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			<p>subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a ...</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to correct errors ... by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or</p>
	<p>Page 26 lines 20-28.</p>	<p>This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs overlay to TV set, 202,</p>	<p>And</p> <p>Page 26 lines 1-8.</p>
	<p>And</p> <p>Column 19 lines 63-66.</p>		<p>Page 37 line 26 to page 38 line 8.</p>

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				fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus ...
(c) controlling a decryptor, descrambler, or enabling device to decrypt, descramble, or enable selected information or to decrypt, descramble, or enable information in consequence of a selected command signal;	Column 20 lines 41-42.	... to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.	Page 478 lines 1-5.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
	Column 20 lines 45-46.	... and all necessary equipment was enabled.	Page 473 line 29 to page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
	Column 20 lines 39-41.	[a signal word] ... which in a predetermined fashion, signal processor, 200, decrypts and transfers ...	Page 282 line 2 to page 283 line 33.	... the information of said segments is encrypted prior to transmission ... The ... program originating studio embeds and transmits the 1st supplementary message (#6) before transmitting said second message. Just as is the case with the first message of example #4, ... receiving the 1st supplementary message (#6) causes the apparatus of said station to decrypt said message (using key J) and execute any controlled functions that are invoked by the unencrypted execution segment of said message. ... Executing said information causes control

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		<p><i>With respect to</i> Column 20 lines 23-26.</p> <p>The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...</p>		<p><i>With respect to</i> Page 471 lines 14-21.</p> <p>Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.</p>	<p>processor, 39J, ... to locate the location of that particular instance of controlled-function-invoking information that is "100110" ... and modify the information at said location to be "111111"</p>
		<p>Column 20 lines 26-27.</p> <p>... to hold and process further in a predetermined fashion.</p>		<p>Page 471 lines 22-25.</p> <p>Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.</p>	
(d) controlling an output device to prepare to output selected programming or data; and		<p>Column 19 lines 45-53.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.</p>		<p>Page 451 lines 6-7.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...</p> <p>Page 23 line 35 to page 24 line 4.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal</p>	

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		These signals instruct microcomputer, 205,		Page 24 lines 5-16.	information should be transferred; and to transfer said signals to said apparatus. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set." ...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
		to generate several graphic video overlays,		Page 451 lines 7-11.	Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.
		which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to		Page 19 line 29 to page 20 line 20.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic
		transmit these overlays to TV set, 202,		Page 26 lines 4-8.	

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		upon command.	Page 44 lines 14-17.	information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
Column 20 lines 5-7.	... and [microcomputer, 205,] prepares to send the next locally generated graphic overlay upon instruction from the originating studio.		Page 26 lines 20-28.	Thereafter the "Wall Street Week" program proceeds, and microcomputer, 205, continues to operate under control of received instructions. Furthermore, it is undesirable to separate computer operations merely because they result in the generation of separate overlays because such separation may result in unnecessary duplication of calculations. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio--eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called
			Page 27 lines 7-9 and Page 451 line 22 to Page 452 line 5.	

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(e) controlling a processor, controller, or computer to respond to one or more selected command signals or instructions or to process one or more selected data.					<p>"over-the-counter" stocks in comparison to the so-called "NASDAQ" index. In order to calculate the value of the overall portfolio, it is necessary to calculate the value of these portions. To require that the values of the portions be recalculated for subsequent overlays would be inefficient.</p> <p>In computer-based combined medium communications, the amount of information that a given system can convey is dependent on the efficiency of the employment of program instruction sets and combining synchronizing commands.</p>
		<p>Column 17 lines 34-36.</p> <p>Column 18 lines 48-55.</p>	<p>Methods for Governing or Influencing the Operation of Equipment that is External to Conventional Television and Radio Sets by</p> <p>Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200. The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.</p>	<p>Page 390 line 13.</p> <p>Page 420 line 21 to page 421 line 7.</p>	<p>Automating Ultimate Receiver Stations</p> <p>Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions.</p> <p>The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.</p> <p>Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit- News-Item SPAM message ...</p> <p>In due course, said remote news-service-A station ...</p>

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	Column 18 lines 55-62.	... microcomputer, 205, instructs signal processor, 200, to hold examples of the sought for unique signals in its buffer/comparator, 8, and compare them with all incoming signals. Signal processor, 200, scans sequentially all channels. When it identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205.	<p>Page 288 lines 13-20.</p> <p>Page 420 line 6 to page 423 line 10.</p>	<p>As Fig. 4 shows, ... in the preferred embodiment, microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.</p> <p>The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information that includes identification information of the particular stocks in said portfolio ...</p> <p>One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T" ...</p> <p>At the station of Fig. 7 and 7C, signal processor, 200, scans sequentially all channels at its switch, 1, mixer, 3, and decoder, 30, in the fashion of example #5. ...</p> <p>Receiving said Select-A T&T-News-Item message causes ... said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information ...</p> <p>Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.</p>

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	Column 18 lines 62-67.	In a predetermined fashion, either microcomputer, 205, or signal processor, 200, instructs tuner, 223, to set cable converter box, 222, to the proper channel, and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing.	<p>Page 423 lines 11-13.</p> <p>Page 424 lines 2-9.</p> <p>Page 426 lines 10-18.</p>
		<p>Receiving said message causes said controller, 20, to cause a selected cable converter box, 222, to receive the transmission identified by said channel mark;</p> <p>Then receiving a particular to-223 instruction from said control processor, 20A, causes controller, 20, to transmits particular instructions, via said control information transmission link, to said tuner, 223, thereby causing said tuner, 223, to tune its associated cable converter box, 222, the to the particular channel transmission of said multi-channel cable transmission that is identified by said channel mark.</p> <p>Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)</p>	
241. The method of claim 235, wherein the receiver station identifies a plurality of embedded signals each of which designates	<p>For example, Column 18 lines 30-35.</p>	<p>TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...</p>	<p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ...</p> <p>Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion.</p> <p>Periodically thereafter, said program</p>

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			<p>originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p> <p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from</p>	
	Page 15 lines 16-22			
	Page 411 lines 10-15			
	Page 418 line 23 to page 419 line 15.			
	Page 13 lines 25-32.			
	Column 4 lines 5-13.	<p>These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they</p>		

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the availability of at least one unit of data, programming, or			cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, , that they can convey signals to equipment that must switch manners or modes of operation during transmissions of individual units of programming, and that they can be monitored.		the programming and, thereby, inhibit automatic processing. They occur at precise times in programming and can synchronize the operation of receiver station apparatus to the timing of programming transmissions. They can be conveniently monitored.
	Column 18 lines 38-41.	Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.		Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
	Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.		Page 397 lines 17-20. Page 449 lines 13-26.	Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ... Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific

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command signals, said method further comprising the steps of:	Column 19 lines 31-34.	FIG 6C can also illustrate how programing delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Page 18 lines 24-27. page 450 line 27 to page 451 line 11.
		information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.) Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations. (To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.) Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed. But the combining of Fig. 1C is just part of a larger process. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.	
	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by	Page 23 line 35 to page 24 line 16.

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		decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.		<p>detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>Page 44 lines 14-17.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>Page 26 lines 20-28.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>Page 26 lines 1-8.</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and</p>
	Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set,		

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		202,...		executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
passing each identified embedded signal to a receiver station apparatus that selects data, programming or command signals of interest to a viewer, listener, or user;	Column 19 lines 14-20.	... pass all program and channel identifiers on all programming being cablecast on the multi-channel system.	Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C ...
			Page 248 lines 22-26 from example #5.	Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.
			Page 250 lines 13-16 from example #5.	Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...
			Page 252 lines 15-35 from example #5.	Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter-monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that

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			includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ... All eight of said messages are commands. The 1st-and 3rd-new -program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) ... microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205. In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... All eight of said messages are commands. The 1st-and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said	
		Page 267 lines 20-28 from example #5.		
	Signal processor, 200, receives this instruction from microcomputer, 205,		Page 288 lines 16-20.	
	which reacts in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14.		Page 435 lines 16-18. Page 267 lines 20-28.	

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controlling said last named apparatus to select one or more units of data, programming, or command signals in response to at least a first identified embedded signal; and		Column 19 lines 20-25.			microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ... Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.
		Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...		Page 435 lines 16-25.	Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input

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				Page 439 lines 9-15.	<p>said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p>
				Page 295 lines 6-8.	<p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p> <p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p>
				Page 408 lines 18-29	<p>storing some information that evidences the selection of a particular unit of data, programming, or command signals or of a particular carrier transmission, with said particular unit or particular carrier transmission being selected in consequence of an identified embedded signal.</p> <p>TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,</p>
		Column 18 lines 30-37.		Page 414 lines 13-27	

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			Page 15 lines 16-22	<p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p>
		The processors, 204 and 210, transfer this information to signal processor, 200,	Page 36 lines 32-33.	<p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p>
			Page 38 lines 11-14.	<p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p>
			Page 411 lines 10-15	<p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p>
			Page 418 line 23 to page 419 line 15.	<p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p>
		for recording and subsequent transmission to a remote data collection site.	Page 411 line 28 to page 412 line 2.	<p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause</p>

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			<p>a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in</p>
		<p>Page 173 line 30 to page 174 line 23 from example #3.</p>	<p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")</p>
		<p>Page 419 lines 4-15.</p>	<p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p>
		<p>Page 28 lines 25-35.</p>	<p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote</p>

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				preprogrammed at its controller, 20, to ...
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243. The method of claim 242, wherein said stored information evidences one from the group consisting of:	Column 17 lines 6-9.	At a time when buffer/comparator, 14, determines in a predetermined fashion that it will receive no further duplicate signals, it transfers the full signal string to recorder, 16.	Page 179 lines 14-24.	Automatically, said process- monitor-info instructions cause onboard controller, 14A, in a predetermined fashion, to locate the instance of "program unit identification code" information in said record of the prior programming displayed at monitor, 202M, and to compare said first named instance of "program unit identification code" information to said second named instance. No match results. Not resulting in a match causes onboard controller, 14A, to cause signal processor, 200, to record said record of prior programming at recorder, 16.
(a) an origin of a transmission;	Column 15 lines 58-60.	[The signals for which the decoders are monitoring] ... are likely to be unique digital codes that may identify each programming or data unit received and the source of each.	Page 49 lines 26-28.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data.
			Page 50 lines 14-20.	... monitor information that identifies what programming is available, ...
	Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	Page 28 lines 26-27.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The Information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			Page 59 lines 29-33.	At this point, an instruction signal is generated at said program originating studio, ...
			Page 25 lines 34-35.	

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			<p>Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p>	<p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205.</p>
(b) a subject matter of some information contained in a transmission;	<p><i>For example,</i> Column 19 lines 48-53.</p>	<p>These signals instruct microcomputer, 205, to generate several graphic video overlays, which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to transmit these overlays to TV set, 202,...</p>	<p><i>For example,</i> Page 24 lines 5-16. Page 451 lines 7-11. Page 19 line 29 to page 20 line 20. Page 26 lines 4-8.</p>	<p>Microcomputer, 205, evaluates the initial signal word or words which instruct it to the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Microcomputer, 205, is a conventional microcomputer system ... for generating computer graphic information; for receiving a composite video transmission; for combining said graphic information onto the video information of said transmission by graphic overlay techniques, well known in the art; and for outputting the resulting combined information to a TV monitor, 202M, in a composite video transmission. ... TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p>

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(c) an identification of some programming contained in a transmission;		Column 15 lines 57-60.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each.	Page 315 lines 20-24.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
				Page 44 lines 26-32.	Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.
				Page 49 line 26 to page 50 line 20.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data.
(d) a time or date that a transmission is transmitted or received;				Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
(e) a supplier or owner of some programming contained in a transmission;		For example, Column 15 lines 60-62.	[The signals for which the decoders are monitoring] may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	For example, Page 49 lines 26-28.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... origins of transmissions (eg., network so source stations, broadcast stations, cable head end stations); dates and times ...
		For example, Column 16 lines 56-61.	... and, in a predetermined fashion, create a signal string	Page 50 lines 1-4.	Then said process-monitor-info instructions cause onboard controller, 14A, to initiate a new monitor record that reflects the new "Wall Street Week" programming.

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			by appending digital information to the received signal which information might	Page 297 line 15. Page 180 lines 4-15.	...creating a meter record that records the decryption.... Automatically, said instructions cause onboard controller, 14A, in a predetermined fashion, to delete ... except the source mark information associated with said record; to record information of said first named instance of "program unit identification code" information (which is the "program unit identification code" of said "Wall Street Week" program to a particular "program unit identification code" location at said record location; to select particular information located at said SPAM-input- signal-@14A register memory and record information at said record location; to select particular preprogrammed record.... In a predetermined fashion, onboard controller, 14A, also records in a particular monitor record field location at said record location a particular display unit identification code that identifies monitor, 202M, as the display apparatus of said new monitor record. In a predetermined fashion, signal processor, 200, records date and time information received from clock, 18, in first and last particular time field...
			identify the individual decoder, 131, 136, 138, 143, 145, 147, 149, or 150 and the time of receipt at signal processor, 130.	Page 181 lines 8-14.	
(f) a step of processing or controlling performed at a transmission station that communicates signals to said receiver station;	<i>For example,</i> Column 11 lines 38-46.	By comparing identification signals on the incoming programming with the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video		<i>For example,</i> Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor

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		recorder/players, 76 and 78.		information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
			Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
			Page 28 lines 26-27.	... monitor information that identifies what programming is available, ...
			Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
			Page 328 lines 14-16.	Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78, ...
	And Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	And Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to

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		<p><i>With</i> Column 18 lines 38-41.</p>	<p>Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.</p>	<p><i>With</i> Page 28 lines 25-35.</p>	<p>matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records for document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p>
(g) some programming that is not processed by or outputted at said receiver station;		<p><i>For example,</i> Column 18 lines 38-41.</p>	<p>Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.</p>	<p><i>For example,</i> Page 28 lines 25-35.</p>	<p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...</p>
				<p>Page 397 lines 17-20.</p>	<p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records for document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...</p>

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	<p><i>With</i> Column 19 lines 14-15.</p>	<p>... pass all program and channel identifiers on all programing being cablecast on the multi-channel system.</p>	<p><i>With</i> Page 435 lines 16-18.</p>	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C ...</p>	
				<p>Via a conventional multi- channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.</p>	
				<p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...</p>	
				<p>Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter- monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if</p>	

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		said program is of interest, ...	
		All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)	Page 267 lines 20-28 from example #5.
	And Column 19 lines 20-25.	Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...	And Page 436 line 9 to page 437 line 6.
	And Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.	

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					Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatusto cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ... Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its... ...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
				Page 439 lines 9-15. Page 295 lines 6-8. Page 439 lines 9-15.	
(h)	an input received by said receiver station; and	For example, Column 20 lines 42-45.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer ...	For example, Page 472 lines 23-27.	... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
(i)	a source of input to or at said receiver station.	For example, Column 15 lines 52-56. Column 15 lines 57-62.	If a unit like the microcomputer can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive. The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of	For example, Page 317 lines 2-6. Page 315 lines 20-24.	If a given intermediate or output apparatus can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive. Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.

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		transmission.	Page 44 lines 26-32. Page 49 line 26 to Page 50 line 4.	<p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.</p> <p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times monitor information that identifies what programming is available, ...
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244. The method of claim 235, wherein the receiver station stores information that evidences	Column 12 lines 45-53.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96, which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.	Page 337 lines 1-19.	<p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field</p>
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a second passing of said at least one identified embedded signal.	Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs. Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, ...

245. The method of claim 244, wherein a storage device stores data, programming, or one or more control signals and the evidence of said second passing is selected from the group consisting of:	Column 16 lines 32-35.	For example, a person might instruct video cassette recorder, 135, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.	Page 319 lines 30-33.	For example, a subscriber might instruct video recorder/player, 217, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.
(a) two or more sources of an embedded signal, with one of said sources designating a storage device; and	For example, Column 16 lines 35-39. And Column 16 lines 32-35.	Recorder, 135, might receive the programming over Manhattan Cable TV channel 4 and record the programming from 7:00 PM to 7:30 PM on the evening of July 15, 1985. For example, a person might instruct video cassette recorder, 135, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.	For example, Page 319 line 33 - Page 320 line 2. And Page 319 lines 30-33.	Recorder, 217, might receive the programming over Manhattan Cable TV channel 4 and record the programming at the time of original broadcast transmission--from 7:00 PM to 7:30 PM on the evening of July 15, 1985. For example, a subscriber might instruct video recorder/player, 217, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.

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	Column 15 lines 58-60.	[The signals for which the decoders are monitoring] ... are likely to be unique digital codes that may identify each programming or data unit received and the source of each.	Page 49 lines 26-28. Page 50 lines 14-20. Page 28 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... monitor information that identifies what programming is available , ...
(b) two or more different times designating an embedded signal, with one of said times designating time shifting.	<i>For example</i> , Column 16 lines 35-39. <i>And</i> Column 16 lines 43-45.	Recorder, 135 , might receive the programming over Manhattan Cable TV channel 4 and record the programming from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Subsequently, the person might play the recorded programming on TV set, 132 , from 10:45 PM to 11:15 PM the same evening.	<i>For example</i> , Page 319 line 33 – Page 320 line 2. <i>And</i> Page 320 lines 24-26.	Recorder, 217, might receive the programming over Manhattan Cable TV channel 4 and record the programming at the time of original broadcast transmission--from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Subsequently, the subscriber might play back the recorded programming and view said programming on TV monitor, 202M, from 10:45 PM to 11:15 PM the same evening.

246. The method of claim 235, wherein a viewer, listener, or user inputs a command signal or wherein said step of storing includes storing some information that evidences a function performed by or	Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200 , conveys to its data recorder, 16 , information that the 567 order was placed by the viewer and all necessary equipment was enabled.	Page 472 lines 23-27. Page 473 line 29 to page 474 line 1.	...Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information. Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe - ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to
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initiated by a user at said station, with said step of	Column 20 lines 42-46.	Then, as part of the predetermined operation , signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.	Page 472 lines 23-27. Page 473 line 29 to page 474 line 1.	increment the information of said signal record of meter information in the fashion described above. ...Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information. Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
storing being in consequence of	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 31 line 30 to page 32 line 6.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...
said at least one identified embedded signal having been passed to the first selected apparatus.	Column 7 lines 50-60.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both . If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-	Page 31 lines 10-22.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both . If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12,

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		determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.		identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.
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247. The method of claim 246, wherein said information that evidences a function is selected from the group consisting of:	Column 20 lines 42-46.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer and all necessary equipment was enabled.	Page 472 lines 23-27. Page 473 line 29 to page 474 line 1.	...Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information. Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
	Column 20 lines 49-54.	Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received.	Page 473 line 29 to page 474 line 1	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
			Page 314 line 30-33.	At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286.

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(a) a purchase made by a viewer, listener, or user ;	Column 20 lines 42-45.	Then, as part of the predetermined operation, signal processor, 200, conveys to its data recorder, 16, information that the 567 order was placed by the viewer ...	Page 472 lines 23-27.	Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus. ... Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
	Column 13 lines 42-43.	[Local input, 102,] may be activated by one or more switches or buttons or combinations.	Page 288 lines 9-13.	In the preferred embodiment, local input, 225, is actuated by keys that are depressed manually by the subscriber in the fashion of the keys of a so-called touch- tone telephone or the keys of a typewriter (or microcomputer) keyboard.
(b) the identity of user or the presence of someone at said receiver station;	Column 8 lines 20-25.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22.	Page 33 lines 7-12.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22.
	Column 20 lines 19-26.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further ...	Page 471 lines 6-25.	Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular

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				signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	
(d) programming presented at said receiver station	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 473 lines 3-13. 		

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		to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe.	Page 478 lines 1-5.	is "100110" ... and modify the information at said location to be "111111". (Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
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248. The method of claim 235, wherein: said step of detecting and identifying comprises the steps of: detecting digital information in said information transmission; and	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
	Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
identifying a signal in said digital information; said step of passing comprises at least one of the steps of:	Column 20 lines 27-29.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...	Page 471 line 35 to page 472 line 1.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...
			Page 438 lines 13-15.	... causing the apparatus of decoder, 30, to commence identifying and processing the individual SPAM messages embedded in said transmission.
			Page 59 lines 29-33.	A SPAM message is the modality whereby the

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					original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
passing information in said signal; and	Column 18 lines 59-62.	When [signal processor, 200] identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205.		Page 422 line 33 to Page 423 line 10.	...cause said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.
passing one or more preprogrammed data in response to said signal information; said step of controlling is selected from the group consisting of:	Column 18 lines 59-62.	When [signal processor, 200] identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205.		Page 422 line 33 to Page 423 line 10.	...cause said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.
(a) causing said controllable receiver station apparatus to	Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is		Page 267 lines 20-28 from example #5.	All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5)

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respond to passed information; and	being televised on channel X.		<p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to ... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week"</i></p>
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				<p><i>program when said program is transmitted.</i></p> <p>Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>... to receive the transmission of cable channel 13; ...</p>
(b) causing said controllable receiver station apparatus to respond to said passed data; and said step of storing comprises the steps of:	Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	<p>Page 439 lines 14-15.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 435 lines 16-25.</p> <p>Page 436 line 9 to page 437 line 3.</p>	<p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p> <p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to</p>

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		the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information. Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. ... to receive the transmission of cable channel 13; ...	
		Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the	Page 439 lines 14-15. Page 31 lines 10-22.
selecting some information in one of said signal and	Column 7 lines 50-60.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment	

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a second said signal; and	Column 18 lines 62-65.	to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	<p>In a predetermined fashion, either microcomputer, 205, or signal processor, 200, instructs tuner, 223, to set cable converter box, 222, to the proper channel, ...</p>	<p>Page 423 lines 11-13.</p> <p>Page 424 lines 2-9.</p>	<p>signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.</p> <p>Receiving said message causes said controller, 20, to cause a selected cable converter box, 222, to receive the transmission identified by said channel mark; ...</p> <p>Then receiving a particular to-223 instruction from said control processor, 20A, causes controller, 20, to transmits particular instructions, via said control information transmission link, to said tuner, 223, thereby causing said tuner, 223, to tune its associated cable converter box, 222, to the particular channel transmission of said multi-channel cable transmission that is identified by said channel mark.</p>
	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	<p>... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...</p>	<p>Page 31 line 30 to page 32 line 6.</p> <p>Page 426 lines 10-18.</p>	<p>Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...</p> <p>Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might</p>

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				cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
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249. The method of claim 235, wherein said receiver station communicates evidence information to a remote data collection station, said remote station being a billing or monitoring	Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.	Page 33 lines 18-20. Page 273 lines 4-6. Page 273 lines 21-25.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor ... The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. ... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer. ... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...
	Column 20 lines 56-57.	... that site can determine for billing purposes that the recipe was, ...	Page 44 lines 26-30.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information, ...
			Page 471 lines 26-31.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...
			Page 473 lines 3-8.	

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station or a station that collects information in a signal transmission, said method further including a step selected from the group consisting of:	Column 18 lines 36-37.	... for recording and subsequent transmission to a remote data collection site.	Page 411 line 28 to page 412 line 2.
			Page 419 lines 4-15.
	Column 18 lines 29-30.	FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.	Page 411 lines 10-11 Page 88 lines 19-22.
		In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission. [Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage. In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen	

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				Company) that collect statistics on viewership and programming usage.
(a) discarding some evidence information detected in a signal transmission at a time when said receiver station is not communicating evidence information to said remote station;	Column 7 line 67 to column 8 line 1.	To avoid overloading digital recorder, 16, with duplicate data, buffer/comparator, 14, has means for counting and discarding duplicate signals.	Page 32 lines 9-12.	To avoid overloading digital recorder, 16, with duplicate data, buffer/comparator, 14, has means for counting and/or discarding duplicate instances of particular signal information ...
(b) selecting one or a plurality of remote stations to communicate information to;	Column 8 lines 50-55.	The controller, 20, also controls the automatic telephone dialing device, 24, to allow the apparatus to automatically output its own information in accordance with a predetermined sequence and to change telephone numbers dialed as required.	Page 273 lines 6-8. Page 274 lines 11-13.	Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Controller, 20, transfers the telephone number, 1-800-CHARGES, to auto dialer, 24, and causes the dialing of said number.
(c) initiating communication with a remote station; and	Column 9 lines 8-13.	Digital recorder, 16, can tell the controller, 20, when it reaches predetermined levels of fullness to permit the controller, 20, to instruct auto dialer, 24, to contact an appropriate remote site allowing the recorder, 16, to output its data making memory available.	Page 33 lines 4-6. Page 272 line 26 to page 273 line 8.	Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness. In each example, ... recorder, 16, measures the quantity of its recording capacity that holds signal records, in a predetermined fashion, and determines that said quantity is equal to or greater than said particular fullness information. Said determining causes recorder, 16, to transfer a particular instruct-to-call instruction to controller, 20, that causes controller, 20, to activate telephone connection, 22, and proceed with a particular preprogrammed telephone signal record transfer sequence that is fully automatic. The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.

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	Column 8 lines 50-55.	The controller, 20, also controls the automatic telephone dialing device, 24, to allow the apparatus to automatically output its own information in accordance with a predetermined sequence and to change telephone numbers dialed as required.	<p>Page 275 line 33 to page 276 line 2.</p> <p>Page 273 lines 6-8.</p> <p>Page 274 lines 11-13.</p>	<p>Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number.</p> <p>Automatically said second computer responds with a particular transmission complete signal that causes controller, 20, to terminate said telephone call then to cause recorder, 16, to erase from memory all said meter charge information.</p> <p>Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number.</p> <p>Controller, 20, transfers the telephone number, 1-800-CHARGES, to auto dialer, 24, and causes the dialing of said number.</p>
(d) causing a remote station to process information detected at said receiver station.	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	<p>Page 28 lines 25-35.</p> <p>Page 44 lines 26-30.</p>	<p>[Signal processor in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...</p>

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		<p>Page 471 lines 26-31.</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,....</p> <p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...</p> <p>Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.</p> <p>Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p>
<p>first, ordered</p> <p>and, second, delivered.</p>	<p>Page 473 lines 3-8.</p> <p>Page 472 lines 23-27 with</p> <p>Page 471 lines 14-16.</p> <p>Page 473 line 29 to Page 474 line 1.</p>	
<p>250. The method of claim 235, wherein a processor, assembles the evidence information into a</p>	<p>Column 9 line 68 to column 10 line 2.</p>	<p>Page 32 lines 20-21.</p> <p>Page 223 lines 22-33.</p> <p>Buffer/comparator, 14, operates under control of controller, 20, ...</p> <p>Said match causes controller, 20, to execute said instructions Under control of said first</p>

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signal record, said method further having one step selected from the group consisting of:					set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter & monitor information (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing information from clock, 18.
				Page 224 lines 12-18.	When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion then discard all information of said record from its memory and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion.
	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.		Page 31 line 30 to page 32 line 6.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...
(a) discarding some stored evidence information;	Column 16 lines 61-64.	To minimize the use of data recorder, 16, buffer/comparator, 14, may evaluate signals in a predetermined fashion and discard some signals rather than passing		Page 323 lines 24-26.	In the preferred embodiment, to minimize unnecessary duplication, prior to retaining monitor information in signal records, onboard controller, 14A, is preprogrammed

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		them to the recorder, 16.	Page 180 lines 1-2. Page 180 lines 13-15. Page 180 lines 20-21.	to... Then said process-monitor-info instructions cause onboard controller, 14A, to initiate a new monitor recordselect particular information located at said SPAM-input- signal-@14A register memory and record information at said record location; to select particular preprogrammed recordfinally, to discard all unrecorded information of said 1st monitor information (#3) ...	
(b) modifying a time datum in a signal record in response to evidence information;	Column 16 line 64 to column 17 line 4.	It may compare each signal from a given source such as decoder, 131, with other signals received earlier from the same source. It may only count incoming duplicate signals or it may append a time code to the end of the basic signal string formed around the first received signal and alter this time designation each time a new duplicate signal is identified so that	Page 178 lines 27-35. 		

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(c) initiating a signal record in response to evidence information;			the time code identifies the time of receipt of the last duplicate signal.		information at said SPAM-input-signal-@14A register memory, in the fashion described above; to locate the instance of "program unit identification code" information in the aforementioned new monitor record; and to compare said first named instance to said second named instance. A match results. Under control of said process- monitor-info instructions, said match causes onboard controller, 14A, to record date and time information, received from clock, 18, at the aforementioned last particular time field of said new monitor record and, in a
	Column 16 lines 51-61.	Signal processor, 130, would probably receive these signals from decoders, 131, 136, 138, 143, 145, 147, 149, and 150) at its buffer/comparator unit, 14 (referring to FIG. 1),		Page 315 lines 6-10.	Fig. 5 shows each decoder as having capacity for transferring monitor information to signal processor, 200, by bus communications means. Said information is received (and processed) at signal processor, 200, by the onboard controller, 14A,
			in a predetermined fashion that would permit signal processor, 130, to identify which decoder the individual signals	Page 32 lines 24-33. Page 322 lines 33-35. Page 174 lines 4-17.	(In circumstances where information collecting and processing functions are extensive--for example, when a given buffer/comparator, 14, must collect monitor information at a subscriber station with apparatus and/or communications flows that are extensive and complex--buffer/comparator, 14, may operate under control of a dedicated, so-called "on-board" controller, 14A, at buffer/comparator, 14, which is preprogrammed with appropriate control instructions and is controlled by controller, 20, similarly to the fashion in which controller, 12 is controlled by controller, 20.) ...that the source mark information identifies decoder, 282, rather than decoder, 203. Under control of said instructions, said match causes control processor, 39I, ... to transfer to

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		come from		<p>said buffer/comparator, 14, header information that identifies a transmission of monitor information then particular decoder-203 information that is the source mark of said decoder, 203,....</p> <p>Automatically, said instructions cause onboard controller, 14A, to compare the information at said source-mark-@14A memory, in a predetermined fashion, with particular pre- entered source-identification mark information that onboard controller, 14A, retains in memory associated with its pre-entered signal records of monitor information. A match results with that particular decoder-203 source mark information that is associated with the aforementioned record of the prior programming displayed at monitor, 202M.</p>	<p>Page 178 lines 27-35.</p>	<p>said buffer/comparator, 14, header information that identifies a transmission of monitor information then particular decoder-203 information that is the source mark of said decoder, 203,....</p> <p>Automatically, said instructions cause onboard controller, 14A, to compare the information at said source-mark-@14A memory, in a predetermined fashion, with particular pre- entered source-identification mark information that onboard controller, 14A, retains in memory associated with its pre-entered signal records of monitor information. A match results with that particular decoder-203 source mark information that is associated with the aforementioned record of the prior programming displayed at monitor, 202M.</p>
		and, in a predetermined fashion, create a signal string		<p>Then said process-monitor-info instructions cause onboard controller, 14A, to initiate a new monitor record that reflects the new "Wall Street Week" programming.</p> <p>...creating a meter record that records the decryption....</p>	<p>Page 180 lines 1-3.</p>	<p>Then said process-monitor-info instructions cause onboard controller, 14A, to initiate a new monitor record that reflects the new "Wall Street Week" programming.</p> <p>...creating a meter record that records the decryption....</p>
		by appending digital information to the received signal which information might		<p>Automatically, said instructions cause onboard controller, 14A, in a predetermined fashion, to delete ... except the source mark information associated with said record; to record information of said first named instance of "program unit identification code" information (which is the "program unit identification code" of said "Wall Street Week" program to a particular "program unit identification code" location at said record location; to select particular information located at said SPAM-input- signal-@14A register memory and record information at</p>	<p>Page 297 line 15.</p> <p>Page 180 lines 4-15.</p>	<p>Automatically, said instructions cause onboard controller, 14A, in a predetermined fashion, to delete ... except the source mark information associated with said record; to record information of said first named instance of "program unit identification code" information (which is the "program unit identification code" of said "Wall Street Week" program to a particular "program unit identification code" location at said record location; to select particular information located at said SPAM-input- signal-@14A register memory and record information at</p>

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			identify the individual decoder, 131, 136, 138, 143, 145, 147, 149, or 150 and the time of receipt at signal processor, 130.	Page 181 lines 8-14.	said record location; to select particular preprogrammed record.... In a predetermined fashion, onboard controller, 14A, also records in a particular monitor record field location at said record location a particular display unit identification code that identifies monitor, 202M, as the display apparatus of said new monitor record. In a predetermined fashion, signal processor, 200, records date and time information received from clock, 18, in first and last particular time field...
(d) selecting a stored datum of evidence in response to information detected in a signal transmission;	Column 16 lines 63-66.	... buffer/comparator, 14 may compare each signal from a given source such as decoder, 131, with other signals received earlier from the same source.		Page 178 lines 27-35.	Automatically, said instructions cause onboard controller, 14A, to compare the information at said source-mark-@14A memory, in a predetermined fashion, with particular pre-entered source-identification mark information that onboard controller, 14A, retains in memory associated with its pre-entered signal records of monitor information. A match results with that particular decoder-203 source mark information that is associated with the aforementioned record of the prior programming displayed at monitor, 202M.
(e) selecting an evidence datum to store in a signal record; and	Column 7 lines 50-60.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.		Page 31 lines 10-22.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects,

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	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 31 line 30 to page 32 line 6.
		assembles, and transfers the appropriate information to buffer/comparator, 14. Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...	
(f) communicating evidence information to an remote station based on a precondition or	Column 9 lines 8-13.	Digital recorder, 16, can tell the controller, 20, when it reaches predetermined levels of fullness to permit the controller, 20, to instruct auto dialer, 24, to contact an appropriate remote site allowing the recorder, 16, to output its data making memory available.	Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness. In each example, ... recorder, 16, measures the quantity of its recording capacity that holds signal records, in a predetermined fashion, and determines that said quantity is equal to or greater than said particular fullness information. Said determining causes recorder, 16, to transfer a particular instruct-to-call instruction to controller, 20, that causes controller, 20, to activate telephone connection, 22, and proceed with a particular preprogrammed telephone signal record transfer sequence that is fully automatic. The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Automatically said second computer responds with a particular transmission complete signal that causes controller, 20, to terminate said
			Page 33 lines 4-6. Page 272 line 26 to page 273 line 8. Page 275 line 33 to page 276 line 2.

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communicating evidence information to a memory location that stores signal records.	Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.	Page 31 line 30 to page 32 line 1.	<p>telephone call then to cause recorder, 16, to erase from memory all said meter charge information.</p> <p>Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...</p>
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251. The method of claim 235, wherein a processor assembles the evidence information into a signal record or	Column 9 line 68 to column 10 line 2.	The controller, 20, instructs buffer/comparator, 14, what signals to discard and how to mark signals and assemble signal strings.	<p>Page 32 lines 20-21.</p> <p>Page 223 lines 22-33.</p>	<p>Buffer/comparator, 14, operates under control of controller, 20, ...</p> <p>Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter & monitor information from (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing information from clock, 18.</p> <p>When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion then discard all</p>
			Page 224 lines 12-18.	

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communicates evidence information to a remote station and		Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 31 line 30 to page 32 line 6.	information of said record from its memory and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion. Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...
		Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.	Page 33 lines 18-20. Page 273 lines 4-6.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor ... The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.
	said at least one identified embedded signal includes a record assembly or communication instruction, said method further comprising the steps of:	Column 8 lines 58-62.	Control signals can be passed to the apparatus by means of the programming transmissions input at switch, 1, and mixer, 2.	Page 273 lines 21-25. Page 59 lines 29-31. Page 290 lines 26-31.	... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer. A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. ... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system

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			<p>transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ...</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...</p> <p>The next day, February 28, 1988 at 2:32 AM, receiving particular time information from said clock, 18, causes said controller, 20, again to cause said switch, 1, and said mixer, 3, to input the transmission of said master channel to said decoder, 30, and to cause said decoder, 30, to commence processing to detect a SPAM end of file signal.</p> <p>Said message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30.</p> <p>Receiving said message causes said controller, 39, to transmit said Read-Meters-of-Selected-Station SPAM message to the controller, 20, of the signal processor, 200, of said station.</p> <p>Executing said ones causes controller, 20, to transmit the current reading information of utilities meter, 262, to a remote metering station computer and cause said computer to process said information. Automatically, controller, 20, ... activates telephone connection, 22; inputs a particular telephone number ...</p>	<p>transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ...</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...</p> <p>The next day, February 28, 1988 at 2:32 AM, receiving particular time information from said clock, 18, causes said controller, 20, again to cause said switch, 1, and said mixer, 3, to input the transmission of said master channel to said decoder, 30, and to cause said decoder, 30, to commence processing to detect a SPAM end of file signal.</p> <p>Said message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30.</p> <p>Receiving said message causes said controller, 39, to transmit said Read-Meters-of-Selected-Station SPAM message to the controller, 20, of the signal processor, 200, of said station.</p> <p>Executing said ones causes controller, 20, to transmit the current reading information of utilities meter, 262, to a remote metering station computer and cause said computer to process said information. Automatically, controller, 20, ... activates telephone connection, 22; inputs a particular telephone number ...</p>
		<p>An example of such a control signal is an instruction for the apparatus to contact a remote telephone unit.</p>	<p>Page 291 lines 21-24.</p> <p>Page 402 lines 21-26.</p> <p>Page 403 lines 7-12.</p> <p>Page 405 lines 20-29.</p>	
<p>passing said record assembly or communication instruction to said processor.</p>	<p>Column 8 lines 62-65.</p>	<p>The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines.</p>	<p>Page 59 lines 29-31.</p>	<p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.</p>

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			For example, page 531 lines 17-22.	Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 ...
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252. The method of claim 251, wherein said last named processor is said selected receiver station apparatus and the passing of the said at least one identified embedded signal	Column 7 lines 50-60.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 31 lines 10-22.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.
	Column 8 lines 62-65.	The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines.	Page 59 lines 29-31. For example, page 531 lines 17-22.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 ...
is evidenced in the assembled or	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined	Page 31 line 30 to page 32 line 6.	Buffer/comparator, 14, receives signal information that is meter information and/or

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communicated evidence information.			fashion, which signals are to be recorded.		monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...
253. The method of claim 235, wherein a plurality of receiver station apparatus communicate evidence information to a processor, that	Column 16 lines 51-54.	Signal processor, 130, would probably receive these signals from decoders, 131, 136, 138, 143, 145, 147, 149, and 150) at its buffer/comparator unit, 14 (referring to FIG. 1), ...		Page 315 lines 6-10. Page 32 lines 24-33.	Fig. 5 shows each decoder as having capacity for transferring monitor information to signal processor, 200, by bus communications means. Said information is received (and processed) at signal processor, 200, by the onboard controller, 14A, ... (In circumstances where information collecting and processing functions are extensive--for example, when a given buffer/comparator, 14, must collect monitor information at a subscriber station with apparatus and/or communications flows that are extensive and complex--buffer/comparator, 14, may operate under control of a dedicated, so-called "on-board" controller, 14A, at buffer/comparator, 14, which is preprogrammed with appropriate control instructions and is controlled by controller, 20, similarly to the fashion in which controller, 12 is controlled by controller, 20.)
assembles evidence information into a signal record, said method further comprising the steps of:	Column 9 line 68 to column 10 line 2.	The controller, 20, instructs buffer/comparator, 14, what signals to discard and how to mark signals and assemble signal strings.		Page 32 lines 20-21. Page 223 lines 22-33.	Buffer/comparator, 14, operates under control of controller, 20, ... Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at

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				buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter & monitor information from (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing information from clock, 18.
			Page 224 lines 12-18.	When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion then discard all information of said record from its memory and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion.
	Column 16 lines 56-61.	... and, in a predetermined fashion, create a signal string	Page 180 lines 1-3.	Then said process-monitor-info instructions cause onboard controller, 14A, to initiate a new monitor record that reflects the new "Wall Street Week" programming.
			Page 297 line 15.	...creating a meter record that records the decryption....
		by appending digital information to the received signal which information might	Page 180 lines 4-15.	Automatically, said instructions cause onboard controller, 14A, in a predetermined fashion, to delete ... except the source mark information associated with said record; to record information of said first named instance of "program unit identification code" information (which is the "program unit identification code" of said "Wall Street Week" program to a particular "program unit identification code" location at said record location; to select particular information

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					located at said SPAM-input-signal-@14A register memory and record information at said record location; to select particular preprogrammed record.... In a predetermined fashion, onboard controller, 14A, also records in a particular monitor record field location at said record location a particular display unit identification code that identifies monitor, 202M, as the display apparatus of said new monitor record. In a predetermined fashion, signal processor, 200, records date and time information received from clock, 18, in first and last particular time field...
(a) buffering evidence information communicated from said plurality of apparatus;	Column 16 lines 51-54.	Signal processor, 130, would probably receive these signals from decoders, 131, 136, 138, 143, 145, 147, 149, and 150) at its buffer/comparator unit, 14 (referring to FIG. 1), ...	Page 181 lines 8-14. Page 315 lines 6-10. Page 32 lines 24-33.	Fig. 5 shows each decoder as having capacity for transferring monitor information to signal processor, 200, by bus communications means. Said information is received (and processed) at signal processor, 200, by the onboard controller, 14A, ... (In circumstances where information collecting and processing functions are extensive--for example, when a given buffer/comparator, 14 , must collect monitor information at a subscriber station with apparatus and/or communications flows that are extensive and complex-- buffer/comparator, 14 , may operate under control of a dedicated, so-called "on-board" controller, 14A, at buffer/comparator, 14 , which is preprogrammed with appropriate control instructions and is controlled by controller, 20, similarly to the fashion in which controller, 12 is controlled by controller, 20.)	
(b) identifying specific ones of said plurality of apparatus as sources of specific data	Column 16 lines 54-56.	... in a predetermined fashion that would permit signal processor, 130, to identify which decoder the individual signals come from ...	Page 322 lines 33-35. Page 174 lines 4-17.	...that the source mark information identifies decoder, 282, rather than decoder, 203. Under control of said instructions, said match	

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of said communicated evidence information;				<p>causes control processor, 39J, ... to transfer to said buffer/comparator, 14, header information that identifies a transmission of monitor information then particular decoder-203 information that is the source mark of said decoder, 203,....</p> <p>Automatically, said instructions cause onboard controller, 14A, to compare the information at said source-mark-@14A memory, in a predetermined fashion, with particular pre- entered source-identification mark information that onboard controller, 14A, retains in memory associated with its pre-entered signal records of monitor information. A match results with that particular decoder-203 source mark information that is associated with the aforementioned record of the prior programming displayed at monitor, 202M.</p>	
(c) causing one or more of said receiver station apparatus to communicate evidence information in response to a control signal or to an embedded signal;	Column 7 lines 50-60.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both . If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 31 lines 10-22.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both . If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.	
(d) outputting a control signal to a controlled device and evidence information to	Column 17 lines 12-17.	Signal divider, 139, monitors the use of signals rather than the use of programming. Every instruction or information signal transmitted from processor, 140, to	Page 315 line 25 to page 316 line 6.	In Fig. 5, decoder, 203, which is part of the signal processor system of the station of Fig. 5, not only monitors the operation of its associated apparatus, microcomputer, 205, but	

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the processor,	microcomputer, 142, is also transmitted to signal processor, 130, to be handled, recorded, and transmitted to a remote site with all other monitor information.	also controls said apparatus, in the fashions described above, in the execution of SPAM controlled functions. Decoder, 203, has means for detecting SPAM information in any programming transmission inputted to its associated apparatus, microcomputer, 205, and not only for detecting and transferring to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message of said transmissions but also for inputting selected detected information to microcomputer, 205, in and for controlling microcomputer, 205, in selected fashions. (Fig. 5 also shows that decoder, 203, has capacity for inputting detected information to signal processor, 200, and for receiving from and transferring control information to signal processor, 200.)	
in response to said at least one identified embedded signal ; and	Column 9 lines 33-40.		For example, in the case of the "Wall Street Week" program, transmitting the first and second SPAM messages of example #3
			In examples #3, ..., the transmission of SPAM signal information causes signal processor, 200, to transfer signal record information by telephone to remote station....
		Each path [described in Figures 2A, 2B, and 2C] is capable of receiving a transmission and detecting digital signals in that portion and transmitting said signals to in-line equipment for further processing. Each of the paths described in FIGS. 2A, 2B, and 2C can identify and process only signals embedded in the particular transmission channel inputted to said paths.	See figures. The apparatus of these separate paths are designed to act on the particular frequency ranges in which embedded signal information may be found. The first path, designated A, detects signal information embedded in the video information portion of said television channel signal. The second path, designated B, detects signal information embedded in the audio information portion of said television channel signal.
			Page 322 lines 19-21.
			Page 271 lines 33 to 35.
			Figs. 2A-2C. Page 35 lines 1-6.
			Page 35 lines 16-18.

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				Page 35 lines 27-30.	The third path, designated C, inputs the separately defined transmission to a digital detector, 38, which detects signal information embedded in any other information portion of said television channel signal...
				Page 36 lines 1-3.	Fig. 2B shows a radio signal decoder that detects and processes signal information embedded in an inputted radio frequency.
				Page 36 lines 18-20.	Fig. 2C shows a signal decoder that detects and processes signal information embedded in a frequency other than a television or radio frequency.
				Page 37 lines 26-28.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.
				Page 438 lines 13-15.	... causing the apparatus of decoder, 30, to commence identifying and processing the individual SPAM messages embedded in said transmission.
				Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
(e) controlling one or more of said receiver station apparatus as to a fashion of receiving, detecting, or identifying embedded signals or evidence information.	Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."		Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a

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				predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ...
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254. The method of claim 235, wherein said receiver station further comprises a data collection device for collecting stored evidence information, said method further comprising the step of:	Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.	Page 31 line 30 to page 32 line 1.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...
causing a processor, controller, or computer to pass stored evidence information to said data collection device	Column 9 lines 8-13.	Digital recorder, 16, can tell the controller, 20, when it reaches predetermined levels of fullness to permit the controller, 20, to instruct auto dialer, 24, to contact an appropriate remote site allowing the recorder, 16, to output its data making memory available.	Page 33 lines 4-6. Page 272 line 26 to page 273 line 8.	Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness. In each example, ... recorder, 16, measures the quantity of its recording capacity that holds signal records, in a predetermined fashion, and determines that said quantity is equal to or greater than said particular fullness information. Said determining causes recorder, 16, to transfer a particular instruct-to-call instruction to controller, 20, that causes controller, 20, to activate telephone connection, 22, and proceed with a particular preprogrammed telephone signal record transfer sequence that is fully automatic. The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. Controller, 20, transfers the telephone number,

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<p>in response to said at least one identified embedded signal.</p>	Column 8 lines 4-7.	<p>Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.</p>	<p>Page 275 line 33 to page 276 line 2.</p> <p>Page 31 line 30 to page 32 line 1.</p>
		<p>1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number.</p> <p>Automatically said second computer responds with a particular transmission complete signal that causes controller, 20, to terminate said telephone call then to cause recorder, 16, to erase from memory all said meter charge information.</p> <p>Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...</p>	
<p>255. The method of claim 235, wherein said receiver station comprises a memory location for storing information of programming availability and said selected receiver station apparatus comprises a processor, or computer for selecting to programming to receive, store, process, or present to a subscriber, wherein: said step of detecting and identifying further comprises the steps of:</p>	Column 18 lines 56-58.	<p>... signal processor, 200, to hold examples of the sought for unique signals in its buffer/ comparator, 8, and compare them with all incoming signals.</p>	<p>The signal processor, 200, of said station is preprogrammed ... with particular news-items-of-interest information of the particular identification information of the particular stocks in said portfolio ...</p> <p>One company whose stock is preprogrammed at said microprocessor, 205, is the American Telephone and Telegraph Company whose stock is identified by particular binary information of "T". And among the news-items-of-interest information at said RAM is an instance of said binary information of "T".</p> <p>...said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the</p>
		Page 422 lines 33 to Page 423 line 4.	

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	Column 18 lines 48-55.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200. The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	Page 420 line 21 to page 421 line 7.	<p>news-items-of-interest information....</p> <p>Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions.</p> <p>The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200.</p> <p>Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit- News-Item SPAM message ...</p> <p>In due course, said remote news-service-A station ...</p>
(1) detecting a signal containing information of programming availability;	Column 18 lines 58-59.	Signal processor, 200, scans sequentially all channels.	Page 422 lines 23-25.	At the station of Fig. 7 and 7C, signal processor, 200, scans sequentially all channels at its switch, 1, mixer, 3, and decoder, 30, in the fashion of example #5.
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.	This base band signal is then transferred through separate paths to three separate detector devices.
	Column 18 lines 52-55.	The news services precede each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.	Page 420 line 32 to page 421 line 17.	<p>Each remote station transmits each particular news item within the particular format of a Transmit-News-Item SPAM message, and receiving any given message in a Transmit-News-Item SPAM message ...</p> <p>In due course, said remote news-service-A station transmits a particular AT&T news item in a particular Transmit-AT&T-News-Item message that is in said Transmit- News-Item SPAM message format and that consists of ... the "program unit identification code"</p>

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					information of said A T&T news item and subject matter information of said binary information of "T", appropriate padding bits, an information segment that contains said AT&T news item, and an end of file signal.
(2) identifying the information of programming availability; said step of passing further comprises the step of:	Column 18 lines 59-62.	When [signal processor, 200] identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205.		Page 422 line 33 to Page 423 line 10.	...cause said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.
passing the information of programming availability to the processor or computer; and said step of controlling further comprises the step of:	Column 7 lines 47-49. Column 18 lines 59-62.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12. When [signal processor, 200] identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205.		Page 30 lines 29-30. Page 422 line 33 to Page 423 line 10.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12. ...cause said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.

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causing the processor or computer to select available programming.	Column 18 lines 62-65.	In a predetermined fashion, either microcomputer, 205, or signal processor, 200, instructs tuner, 223, to set cable converter box, 222, to the proper channel,...	Page 423 lines 11-13. Page 424 lines 2-9.	Receiving said message causes said controller, 20, to cause a selected cable converter box, 222, to receive the transmission identified by said channel mark; ... Then receiving a particular to-223 instruction from said control processor, 20A, causes controller, 20, to transmits particular instructions, via said control information transmission link, to said tuner, 223, thereby causing said tuner, 223, to tune its associated cable converter box, 222, the to the particular channel transmission of said multi-channel cable transmission that is identified by said channel mark.
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256. The method of claim 235, wherein said receiver station comprises an output device and said selected receiver station apparatus comprises a processor, controller, or computer associated with an input device, wherein:	Column 18 lines 48-51. Column 19 lines 18-20.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to converter boxes, 222 and 201, and to signal processor, 200. [processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.	Page 420 lines 21-29. Page 435 lines 16-18. Page 267 lines 20-28 from example #5.	Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from geographically separate locations, two different broadcast print transmissions. The intermediate transmission station of Fig. 6 receives and retransmits information the transmissions of said remote stations on digital data channels A and B, respectively, that are inputted to converter boxes, 222 and 201, and to signal processor, 200. In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station
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		receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)	
		In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)	<p>Page 268 line 28 to page 269 line 12 from example #5.</p>
said step of passing comprises the step of passing an instruct-to-output signal to the computer;	Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14.	<p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p>
		All eight of said messages are commands. The 1st- and 3rd-new-radio-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired	

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			<p>programming.)</p> <p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ...</p> <p>Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)</p>
<p>said step of controlling comprises the step of causing the computer to output information stored in the computer's memory to said output device.</p>	<p>Column 19 lines 20-25.</p>	<p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...</p>	<p>Page 268 line 28 to page 269 line 12 from example #5.</p>
			<p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13 ...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</p> <p>Automatically, microcomputer, 205, compares said one instance to said</p>

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				<p>program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;</p> <p>...</p>
				Page 439 lines 9-15.
				Page 295 lines 6-8.
				Page 439 lines 9-15.

257. The method of claim 235, wherein said selected receiver station apparatus includes a computer wherein:	Column 19 lines 42-44.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 20-24.	Microcomputer, 205, is preprogrammed to ... respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission.
said step of detecting and identifying comprises the step of detecting and identifying an instruction-to-generate signal;	Column 19 line 64 to column 20 line 1.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from	Page 26 lines 1-2.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...
			Page 37 lines 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the

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		processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance
	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	And the Fig. 1C combining is displayed.
			This base band signal is then transferred through separate paths to three separate detector devices.
said step of passing comprises the step of passing said instruct-to-generate signal to said computer; and	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...
			In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is

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said step of controlling comprises the step of causing the computer to process information stored in the computer's memory in response to the instruct-to-generate signal and thereby					preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		Page 26 lines 4-10.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
	Column 19 lines 39-41.	[Microcomputer, 205.] records those prices that relate to the stocks in its stored portfolio.		Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
generate one or more receiver specific data.	Column 19 line 67 to column 20 line 1.	The viewer then sees a microcomputer generated graphic of his own stocks' performance ...		Page 26 lines 8-11.	TV monitor, 202M, then displays ... the microcomputer generated graphic of the subscriber's own portfolio performance ...
258. A receiver station comprising:	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.		Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
means (a) for receiving an	Column 6 lines 30-41.	The cable transmission is input simultaneously to switch 1 and mixer 2.		Page 29 lines 15-26.	The cable transmission is inputted simultaneously to switch, 1, and mixer, 2.

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information transmission containing television programming;			The broadcast transmission is input to switch 1. Switch 1 and mixers 2 and 3 are all controlled by local oscillator and switch control 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer 3 which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.		The broadcast transmission is input to switch, 1. Switch, 1, and mixers, 2 and 3, are all controlled by local oscillator and switch control, 6. The oscillator, 6, is controlled to provide a number of discrete specified frequencies for the particular radio and television channels required. The switch, 1, acts to select the broadcast input or the cablecast input and passes transmissions to mixer, 3, which, with the controlled oscillator, 6, acts to select a television frequency of interest that is passed at a fixed frequency to a TV signal decoder, 30.
means (b) for detecting and identifying at least one of a plurality of embedded signals in said information transmission;	Column 9 lines 33-40.	Each path [described in Figures 2A, 2B, and 2C] is capable of receiving a transmission or a portion of a transmission and detecting digital signals in that portion and transmitting said signals to in-line equipment for further processing. Each of the paths described in FIGS. 2A, 2B, and 2C can identify and process only signals embedded in the particular transmission channel inputted to said paths.	Figs. 2A-2C. Page 35 lines 1-6. Page 35 lines 16-18. Page 35 lines 27-30. Page 36 lines 1-3. Page 36 lines 18-20.	See figures. The apparatus of these separate paths are designed to act on the particular frequency ranges in which embedded signal information may be found. The first path, designated A, detects signal information embedded in the video information portion of said television channel signal. The second path, designated B, detects signal information embedded in the audio information portion of said television channel signal. The third path, designated C, inputs the separately defined transmission to a digital detector, 38, which detects signal information embedded in any other information portion of said television channel signal... Fig. 2B shows a radio signal decoder that detects and processes signal information embedded in an inputted radio frequency. Fig. 2C shows a signal decoder that detects and processes signal information embedded in a frequency other than a television or radio frequency.	

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		Column 4 lines 62-65.	... to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...	Page 37 lines 26-28.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.
		Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 15 lines 21-23.	... transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...
	means (c) for selecting a first apparatus based on information within said at least one of said plurality of embedded signals;	Column 7 lines 50-60.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.
				Page 31 lines 10-22.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.
	means (d) for passing a first identified embedded signal to or	Column 8 lines 58-65.	Control signals can be passed to the apparatus by means of the programming transmissions input at switch, 1, and mixer, 2. An example of such a control signal is an instruction for the apparatus to contact a remote telephone unit. The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines.	Page 59 lines 29-31.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
				Page 290 lines 26-31.	... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200,

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			<p>Page 291 lines 21-24.</p> <p>Page 402 lines 21-26.</p> <p>Page 403 lines 7-12.</p> <p>Page 405 lines 20-29.</p> <p>For example, page 531 lines 17-22.</p>	<p>and to input said selected to TV signal decoder, 30; ...</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...</p> <p>The next day, February 28, 1988 at 2:32 AM, receiving particular time information from said clock, 18, causes said controller, 20, again to cause said switch, 1, and said mixer, 3, to input the transmission of said master channel to said decoder, 30, and to cause said decoder, 30, to commence processing to detect a SPAM end of file signal.</p> <p>Said message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30.</p> <p>Receiving said message causes said controller, 39, to transmit said Read-Meters-of-Selected-Stations SPAM message to the controller, 20, of the signal processor, 200, of said station.</p> <p>Executing said ones causes controller, 20, to transmit the current reading information of utilities meter, 262, to a remote metering station computer and cause said computer to process said information. Automatically, controller, 20, ... activates telephone connection, 22; inputs a particular telephone number ...</p> <p>Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather</p>

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within at least one reprogrammable device at said receiver station;	Column 4 lines 5-6.	These techniques employ signals embedded in programs.	Page 438 lines 13-15.	than via matrix switch, 259 causing the apparatus of decoder, 30, to commence identifying and processing the individual SPAM messages embedded in said transmission.
	Column 7 lines 46-47.	Decrypter, 10, then passes the decrypted signals to processor or monitor, 12.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Page 13 lines 25-26.	The present invention employs signals embedded in programming.
	Column 8 lines 20-25.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22.	Page 30 line 35 to page 31 line 1.	Decryptor, 10, transfers decrypted signals to controller, 12.
			Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
means (e) for controlling			Page 33 lines 7-12.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22.
	Column 8 lines 20-27.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing	Page 33 lines 7-20.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26,

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said selected first apparatus		Column 8 lines 58-60.	apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus. Control signals can be passed to the apparatus by means of the programming transmissions input at switch, 1, and mixer, 2.	Page 290 lines 26-31.	uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has capacity for controlling the operation of all elements of the signal processor causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ...
based on instructions within said first identified embedded signal; and		Column 8 lines 62-65.	The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines.	Page 291 lines 21-24. Page 59 lines 29-31. Page 59 lines 29-31. For example, page 531 lines 17-22.	In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ... A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 ...
means (f) for storing		Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 31 line 30 to page 32 line 6.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or

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information evidencing said controlling.		Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.		monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...
		<i>And, for example,</i> Column 9 lines 47-57.	The controller, 20, is programed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.	Page 31 lines 14-18.	If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
				<i>And, for example,</i> Page 248 line 17 to page 249 line 5.	Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.
				Page 257 line 24 to page 258 line 19.	Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ... Controller, 20, has capacity for keeping track of elapsed time, and after determining in

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			<p>a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p>
		<p>The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.</p>	<p>Page 257 line 24 to page 258 line 19.</p>
			<p>Page 265 line 27 to Page 266 line 21.</p>

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		This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.	Page 250 lines 13-17.	Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command.
			Page 251 lines 8-11.	Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...
			Page 263 lines 19-24.	... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.
			Page 37 lines 26-28.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.

259. The receiver station of claim 258, wherein: said means (a) comprises receiver circuitry for receiving at least some portion of television, radio, or other carrier transmission signal;	See Figs. 2A, 2B and 2C.		See Figs. 2A, 2B and 2C.	
said means (b) comprises one or more	Column 9 lines 33-40.	Each path [described in Figures 2A, 2B, and 2C] is capable of receiving a	Figs. 2A-2C. Page 35 lines 1-6.	See figures. The apparatus of these separate paths are

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detectors operatively connected to said means (a);		transmission or a portion of a transmission and detecting digital signals in that portion and transmitting said signals to in-line equipment for further processing. Each of the paths described in FIGS. 2A, 2B, and 2C can identify and process only signals embedded in the particular transmission channel inputted to said paths.		designed to act on the particular frequency ranges in which embedded signal information may be found. The first path, designated A, detects signal information embedded in the video information portion of said television channel signal. The second path, designated B, detects signal information embedded in the audio information portion of said television channel signal. The third path, designated C, inputs the separately defined transmission to a digital detector, 38, which detects signal information embedded in any other information portion of said television channel signal...	
				Page 35 lines 16-18. Page 35 lines 27-30.	
				Page 36 lines 1-3. Page 36 lines 18-20.	Fig. 2B shows a radio signal decoder that detects and processes signal information embedded in an inputted radio frequency. Fig. 2C shows a signal decoder that detects and processes signal information embedded in a frequency other than a television or radio frequency.
				Page 37 lines 26-28.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.
		... to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...		Page 15 lines 21-23.	... transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...
said means (c) comprises one or more buffers,	Column 4 lines 62-65.	In a pre-determined fashion, buffer/comparator, 8, identifies signal words and/or signal units that must be decrypted, either in whole or in part, and passes identified signal words and/or units	Column 7 lines 39-43.	Page 30 lines 21-26.	In a fashion described more fully below, buffer/comparator, 8, and a controller, 20, which, too, is described more fully below, determine whether signal processor, 26, is enabled to decrypt said information. If signal

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switches, or processors	Column 8 lines 7-12.	to decrypter, 10.		processor, 26, is so enabled, buffer/comparator, 8, transfers said information to decryptor, 10.
	See Figs. 6F&G.	Buffer/comparator, 14, also has means for determining, in a predetermined fashion, when signals require transfer immediately to a remote site and for communicating such a requirement to controller, 20, and such signals directly with the remote site via telephone connection, 22.	Page 32 lines 16-20.	Buffer/comparator, 14, also has means for transferring received information immediately to a remote site or sites via telephone connection, 22, and for communicating a requirement for such transfer to controller, 20, which causes such transfer.
	Column 7 lines 50-54.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.	See Fig. 7. Page 31 lines 10-14.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both.
operatively connected to said means (b) and a plurality of controllable receiver station apparatus;	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
	See Fig. 1.		See Fig. 2.	
	Column 8 lines 25-27.	The controller, 20, governs the operation of all operating elements of the apparatus.	Page 33 lines 18-20.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...
	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
	See Fig. 1.		See Fig. 2.	

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said means (d) comprises one or more programmable devices operatively connected to said means (c) and at least one controllable receiver station apparatus; and	Figs. 6F&G are also pertinent.	Column 8 lines 20-27.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.	Fig. 7 is also pertinent.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has a capacity for controlling the operation of all elements of the signal processor ...
	Column 18 lines 46-48.	... microprocessor, 205, is programmed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	See Fig. 2 and Fig. 7C.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.
	See Fig. 1 and Fig. 6C.				
said means (e) comprises one or more memories or	Column 6 lines 23-30.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	Page 29 lines 4-15.		Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.
	Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.	Page 31 line 30 to page 32 line 1.		Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records

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processors operatively connected to said means (d).	Column 7 lines 59-60.	If [a signal or signals] are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 31 lines 18-22.	to a digital recorder, 16, ... If [a signal or signals] contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.
	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
	Column 18 lines 22-25.	Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly. These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.	Page 408 lines 31-34.	Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.
	Column 18 lines 30-37.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,	Page 410 lines 10-11. Page 408 lines 18-29	Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ... Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.
			Page 414 lines 13-27	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder,

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			210, and inputted to said controller, 44.	
			Page 15 lines 16-22	The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...
	The processors, 204 and 210, transfer this information to signal processor, 200,		Page 36 lines 32-33.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.
			Page 38 lines 11-14.	Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.
			Page 411 lines 10-15	... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.
			Page 418 line 23 to page 419 line 15.	Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.
	for recording and subsequent transmission to a remote data collection site.		Page 411 line 28 to page 412 line 2.	In the fashion of example #3 above, receiving said first transmission of monitor information

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			<p>causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor</p>
			<p>Page 173 line 30 to page 174 line 23 from example #3.</p> <p>Page 419 lines 4-15.</p> <p>Page 28 lines 25-35.</p>

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				records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
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260. The receiver station of claim 258, further comprising: means for communicating evidence information from a plurality of evidence information detectors or	Column 16 lines 3-13.	In FIG 5, each decoder receives every relevant signal received by its associated player or recorder unit.	Page 314 lines 34-35.	At any given subscriber station, any given SPAM decoder may merely monitor the operation of its associated....
		For example, TV set, 131, may receive programming from many sources including cable converter box, 133, video cassette recorder, 135, and videodisc player, 137. In every programming unit played on TV set, 132, TV decoder, 131, receives every signal for which it is instructed to search in a predetermined fashion and	Page 315 lines 20-24.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
		transfers the signals to signal processor, 130,	Page 313 lines 16-23.	Fig. 5 shows a variety of input apparatus with capacity for inputting programming (including SPAM information) selectively, via matrix switch, 258, to apparatus of the subscriber station of Fig. 5, intermediate apparatus with capacity for processing and/or recording inputted programming selectively, and output apparatus for displaying or otherwise outputting programming selectively to human senses.
			Page 314 lines 20-28.	Associated with each intermediate apparatus and output apparatus is one or more appropriate decoders. ... At TV tuner, 215, is TV decoder, 282. ... At TV monitor, 202M, is TV decoder, 145.
			Page 315 lines 6-8.	Fig. 5 shows each decoder as having capacity for transferring monitor information to signal processor, 200, by bus communications means.
			Page 315 lines 20-24.	Each one of said decoders is preprogrammed

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				to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
		which has means to identify the source decoder from which each signal that it receives comes.	Page 322 lines 33-35. Page 174 lines 4-14.	...monitor information (#3) except that the source mark information identifies decoder, 282, rather than decoder, 203. Under control of said instructions, said match causes control processor, 39J, to cause matrix switch, 39I, to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, (while said switch is simultaneously transferring information from control processor, 39J, to the CPU of microcomputer, 205); to transfer to said buffer/comparator, 14, header information that identifies a transmission of monitor information then particular decoder-203 information that is the source mark of said decoder, 203,...
	Column 15 lines 57-60.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each.	Page 315 lines 20-24.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
			Page 44 lines 26-32.	Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.

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			<p>Page 49 line 26 to page 50 line 20.</p> <p>Page 28 lines 26-27.</p>	<p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <ul style="list-style-type: none"> ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... monitor information that identifies what programming is available, ...
processors;	Column 17 lines 12-17.	Signal divider, 139, monitors the use of signals rather than the use of programming. Every instruction or information signal transmitted from processor, 140, to microcomputer, 142, is also transmitted to signal processor, 130, to be handled, recorded, and transmitted to a remote site with all other monitor information.	<p>Page 315 line 25 to page 316 line 6.</p> <p>Page 322 lines 19-21.</p> <p>Page 271 lines 33 to 35.</p>	<p>In Fig. 5, decoder, 203, which is part of the signal processor system of the station of Fig. 5, not only monitors the operation of its associated apparatus, microcomputer, 205, but also controls said apparatus, in the fashions described above, in the execution of SPAM controlled functions. Decoder, 203, has means for detecting SPAM information in any programming transmission inputted to its associated apparatus, microcomputer, 205, and not only for detecting and transferring to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message of said transmissions but also for inputting selected detected information to microcomputer, 205, in and for controlling microcomputer, 205, in selected fashions. (Fig. 5 also shows that decoder, 203, has capacity for inputting detected information to signal processor, 200, and for receiving from and transferring control information to signal processor, 200.)</p> <p>For example, in the case of the "Wall Street Week" program, transmitting the first and second SPAM messages of example #3</p> <p>In examples #3, ..., the transmission of SPAM signal information causes signal processor, 200, to transfer signal record</p>

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	Column 7 lines 59-60.	If [a signal or signals] are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 31 lines 18-22.	information by telephone to remote station.... If [a signal or signals] contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.
means for assembling signal records on the basis of evidence information communicated from said one or more evidence information detectors or	Column 6 lines 23-30.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.	Page 29 lines 4-15.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.
	Column 16 lines 51-61.	Signal processor, 130, would probably receive these signals from decoders, 131, 136, 138, 143, 145, 147, 149, and 150) at its buffer/comparator unit, 14 (referring to FIG. 1),	Page 315 lines 6-10.	Fig. 5 shows each decoder as having capacity for transferring monitor information to signal processor, 200, by bus communications means. Said information is received (and processed) at signal processor, 200, by the onboard controller, 14A, ...
			Page 32 lines 24-33.	(In circumstances where information collecting and processing functions are extensive--for example, when a given buffer/comparator, 14, must collect monitor information at a subscriber station with apparatus and/or communications flows that are extensive and complex--buffer/comparator, 14, may operate under control of a dedicated, so-called "on-board" controller, 14A, at buffer/comparator, 14, which is preprogrammed with appropriate control instructions and is controlled by controller, 20, similarly to the fashion in which controller, 12 is controlled by controller, 20.)

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		in a predetermined fashion that would permit signal processor, 130, to identify which decoder the individual signals come from	Page 322 lines 33-35. Page 174 lines 4-17. Page 178 lines 27-35.	... that the source mark information identifies decoder, 282, rather than decoder, 203. Under control of said instructions, said match causes control processor, 39J, ... to transfer to said buffer/comparator, 14, header information that identifies a transmission of monitor information then particular decoder-203 information that is the source mark of said decoder, 203,.... Automatically, said instructions cause onboard controller, 14A, to compare the information at said source-mark-@14A memory, in a predetermined fashion, with particular pre- entered source-identification mark information that onboard controller, 14A, retains in memory associated with its pre-entered signal records of monitor information. A match results with that particular decoder-203 source mark information that is associated with the aforementioned record of the prior programming displayed at monitor, 202M.
		and, in a predetermined fashion, create a signal string	Page 180 lines 1-3.	Then said process-monitor-info instructions cause onboard controller, 14A, to initiate a new monitor record that reflects the new "Wall Street Week" programming.
		by appending digital information to the received signal which information might	Page 297 line 15. Page 180 lines 4-15.	...creating a meter record that records the decryption.... Automatically, said instructions cause onboard controller, 14A, in a predetermined fashion, to delete ... except the source mark information associated with said record; to record information of said first named instance of "program unit identification code" information (which is the "program unit identification code" of said "Wall Street

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		<p>identify the individual decoder, 131, 136, 138, 143, 145, 147, 149, or 150 and the time of receipt at signal processor, 130.</p>	<p>Week" program to a particular "program unit identification code" location at said record location; to select particular information located at said SPAM-input-signal-@14A register memory and record information at said record location; to select particular preprogrammed record</p> <p>In a predetermined fashion, onboard controller, 14A, also records in a particular monitor record field location at said record location a particular display unit identification code that identifies monitor, 202M, as the display apparatus of said new monitor record. In a predetermined fashion, signal processor, 200, records date and time information received from clock, 18, in first and last particular time field...</p>
processors; and	Column 17 lines 12-17.	Signal divider, 139, monitors the use of signals rather than the use of programming. Every instruction or information signal transmitted from processor, 140, to microcomputer, 142, is also transmitted to signal processor, 130, to be handled, recorded, and transmitted to a remote site with all other monitor information.	<p>Page 181 lines 8-14.</p> <p>Page 315 line 25 to page 316 line 6.</p> <p>In Fig. 5, decoder, 203, which is part of the signal processor system of the station of Fig. 5, not only monitors the operation of its associated apparatus, microcomputer, 205, but also controls said apparatus, in the fashions described above, in the execution of SPAM controlled functions. Decoder, 203, has means for detecting SPAM information in any programming transmission inputted to its associated apparatus, microcomputer, 205, and not only for detecting and transferring to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message of said transmissions but also for inputting selected detected information to microcomputer, 205, and for controlling microcomputer, 205, in selected fashions. (Fig. 5 also shows that decoder, 203, has capacity for inputting detected information to signal processor, 200, and for receiving from and transferring control information to signal processor, 200.)</p>

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			Page 322 lines 19-21. Page 271 lines 33 to 35. Page 31 lines 18-22.	For example, in the case of the "Wall Street Week" program, transmitting the first and second SPAM messages of example #3 In examples #3, ..., the transmission of SPAM signal information causes signal processor, 200, to transfer signal record information by telephone to remote station.... If [a signal or signals] contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.
means for communicating said signal records to a remote station.	Column 7 lines 59-60. Column 17 lines 6-9.	If [a signal or signals] are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14. At a time when buffer/comparator, 14, determines in a predetermined fashion that it will receive no further duplicate signals, it transfers the full signal string to recorder, 16.	Page 179 lines 14-24.	Automatically, said process- monitor-info instructions cause onboard controller, 14A, in a predetermined fashion, to locate the instance of "program unit identification code" information in said record of the prior programming displayed at monitor, 202M, and to compare said first named instance of "program unit identification code" information to said second named instance. No match results. Not resulting in a match causes onboard controller, 14A, to cause signal processor, 200, to record said record of prior programming at recorder, 16. Controller, 20, has capacity for controlling the operation of all elements of the signal processor ... The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. ... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said
	Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.	Page 33 lines 18-20. Page 273 lines 4-6. Page 273 lines 21-25.	

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				connection, 22, to transmit said records and information to said first computer.
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261. The receiver station apparatus of claims 258, 259 or 260, further comprising: a plurality of first processors each capable of	(1) Column 8 lines 62-65.	The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines.	Page 59 lines 29-31. For example, page 531 lines 17-22.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 ...
	(2) Column 18 lines 17-19.	Monitor or processor, 204, determines that certain signals are addressed to switch, 212, and transfers these signals to switch, 212.	Page 408 lines 31-34. Page 95 lines 18-24.	Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209. Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... , and to transfer said message to So transferring said message is the controlled function that the information said header and execution segment cause controller, 39, to perform.
	(1) Column 7 lines 50-54.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.	Page 31 lines 10-14.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both.

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	Column 9 lines 33-40.	Each path [described in Figures 2A, 2B, and 2C] is capable of receiving a transmission or a portion of a transmission and detecting digital signals in that portion and transmitting said signals to in-line equipment for further processing. Each of the paths described in FIGS. 2A, 2B, and 2C can identify and process only signals embedded in the particular transmission channel inputted to said paths.	Figs. 2A-2C. Page 35 lines 1-6.	See figures. The apparatus of these separate paths are designed to act on the particular frequency ranges in which embedded signal information may be found. The first path, designated A, detects signal information embedded in the video information portion of said television channel signal. The second path, designated B, detects signal information embedded in the audio information portion of said television channel signal. The third path, designated C, inputs the separately defined transmission to a digital detector, 38, which detects signal information embedded in any other information portion of said television channel signal...
			Page 35 lines 16-18.	Fig. 2B shows a radio signal decoder that detects and processes signal information embedded in an inputted radio frequency.
			Page 35 lines 27-30.	Fig. 2C shows a signal decoder that detects and processes signal information embedded in a frequency other than a television or radio frequency.
			Page 36 lines 1-3.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.
			Page 36 lines 18-20.	... transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ...
			Page 37 lines 26-28.	Periodically thereafter, said program
	Column 4 lines 62-65. (2) Column 18 lines 14-19.	... to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; ... TV signal decoder, 203, detects signals in	Page 15 lines 21-23. Page 408 lines 18-29.	

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	<p>the programing transmission on the channel which signals it transfers to monitor or processor, 204. Monitor or processor, 204, determines that certain signals are addressed to switch, 212, and transfers these signals to switch, 212.</p>	<p>the programing transmission on the channel which signals it transfers to monitor or processor, 204. Monitor or processor, 204, determines that certain signals are addressed to switch, 212, and transfers these signals to switch, 212.</p>	<p>originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of ... an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, ...</p> <p>Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>... causing the apparatus of decoder, 30, to</p>	<p>originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of ... an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, ...</p> <p>Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p> <p>... causing the apparatus of decoder, 30, to</p>

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(2) controlling at least one receiver station apparatus and	(1) Column 8 lines 62-65.	The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines.	Page 59 lines 29-33.	commence identifying and processing the individual SPAM messages embedded in said transmission. A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	(2) Column 18 lines 19-22.	These signals instruct switch, 212, to turn power on to radio, 209, and its associated equipment, including a conventional digital tuner, 213.	Page 410 lines 10-11.	Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 ...
(3) communicating evidence information; and	(1) Column 7 lines 59-60.	If [a signal or signals] are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 31 lines 18-22.	Receiving said SPAM message causes said controller, 44, switch power on to ... radio, 209, ...
	(2) Column 18 lines 30-37.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals	Page 408 lines 18-29	If [a signal or signals] contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14. Periodically thereafter, said program originating studio embeds in said transmission

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		that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,		and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.
			Page 414 lines 13-27	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.
			Page 15 lines 16-22	The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...
		The processors, 204 and 210, transfer this information to signal processor, 200,	Page 36 lines 32-33.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.
			Page 38 lines 11-14.	Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.
			Page 411 lines 10-15	... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of

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		<p>for recording and subsequent transmission to a remote data collection site.</p>	<p>Page 418 line 23 to page 419 line 15.</p> <p>Page 411 line 28 to page 412 line 2.</p> <p>Page 173 line 30 to page 174 line 23 from example #3.</p>	<p>said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")</p>
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				Page 419 lines 4-15.	In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.
				Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
a second processor capable of receiving said evidence information from said plurality of first processors and		Column 18 lines 35-36.	The processors, 204 and 210, transfer this information to signal processor, 200, ...	Page 411 lines 10-15.	... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.
				Page 418 line 23 to page 419 line 31	Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.
				Page 36 lines 32-33.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor,

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			<p>Page 38 lines 11-14.</p> <p>Page 173 line 30 to page 174 line 23.</p>	<p>ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")</p>
	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	<p>Page 31 line 30 to page 32 line 6.</p>	<p>Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...</p>
	Column 7 lines 59-60.	If [a signal or signals] are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 31 lines 18-22.	<p>If [a signal or signals] contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.</p>
assembling signal	Column 9 line 68 to	The controller, 20, instructs	Page 32 lines 20-21.	Buffer/comparator, 14, operates under control

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records on the basis of said received evidence information or	column 10 line 2.	buffer/comparator, 14, what signals to discard and how to mark signals and assemble signal strings.	Page 223 lines 22-33.
		of controller, 20, ... Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter & monitor information from (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing information from clock, 18.	
	Column 7 lines 65-67.	When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion then discard all information of said record from its memory and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion. Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...	Page 224 lines 12-18. Page 31 line 30 to page 32 line 6.

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communicating said received evidence information to a remote station.		Column 8 lines 7-12.	Buffer/comparator, 14, also has means for determining, in a predetermined fashion, when signals require transfer immediately to a remote site and for communicating such a requirement to controller, 20, and such signals directly with the remote site via telephone connection, 22.	Page 32 lines 16-20.	Buffer/comparator, 14, also has means for transferring received information immediately to a remote site or sites via telephone connection, 22, and for communicating a requirement for such transfer to controller, 20, which causes such transfer.
262. The receiver station apparatus of any one of claims 258, 259 or 260, further comprising: means for communicating		Column 7 lines 50-54.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.	Page 31 lines 10-14.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both.
identified embedded signals		Column 9 lines 33-40.	Each path [described in Figures 2A, 2B, and 2C] is capable of receiving a transmission or a portion of a transmission and detecting digital signals in that portion and transmitting said signals to in-line equipment for further processing. Each of the paths described in FIGS. 2A, 2B, and 2C can identify and process only signals embedded in the particular transmission channel inputted to said paths.	Figs. 2A-2C. Page 35 lines 1-6. Page 35 lines 16-18. Page 35 lines 27-30. Page 36 lines 1-3.	<i>See figures.</i> The apparatus of these separate paths are designed to act on the particular frequency ranges in which embedded signal information may be found. The first path, designated A, detects signal information embedded in the video information portion of said television channel signal. The second path, designated B, detects signal information embedded in the audio information portion of said television channel signal. The third path, designated C, inputs the separately defined transmission to a digital detector, 38, which detects signal information embedded in any other information portion of said television channel signal... Fig. 2B shows a radio signal decoder that detects and processes signal information embedded in an inputted radio frequency.

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			<p>Page 35 lines 27-30.</p> <p>Page 36 lines 1-3.</p> <p>Page 36 lines 18-20.</p> <p>Page 37 lines 26-28.</p> <p>Page 30 lines 29-30.</p>	<p>information embedded in the audio information portion of said television channel signal.</p> <p>The third path, designated C, inputs the separately defined transmission to a digital detector, 38, which detects signal information embedded in any other information portion of said television channel signal...</p> <p>Fig. 2B shows a radio signal decoder that detects and processes signal information embedded in an inputted radio frequency.</p> <p>Fig. 2C shows a signal decoder that detects and processes signal information embedded in a frequency other than a television or radio frequency.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p> <p>Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.</p>
means for communicating television or radio programming selectively to one of	Column 9 lines 47-57.	The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.	Page 248 line 17 to page 249 line 5.	Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat

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			Page 257 line 24 to page 258 line 19.	said pattern. Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ... Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.
	The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at a particular time interval.		Page 257 line 24 to page 258 line 19.	Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ... Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.
			Page 265 line 27 to Page 266 line 21.	Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, causes ...

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				to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ... After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.
		This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.	Page 250 lines 13-17.	Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synchron command.
			Page 251 lines 8-11.	Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...
			Page 263 lines 19-24.	... said information to radio decoder, 42, which decodes the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.
			Page 37 lines 26-28.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.
	Column 6 lines 30-41.	The cable transmission is input simultaneously to switch 1 and mixer 2.	Page 29 lines 15-26.	The cable transmission is inputted simultaneously to switch, 1, and mixer, 2.

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	equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a predetermined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.		transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
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263. A method of controlling	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33. Page 25 line 34 to page 26 line 1. Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11. Page 390 lines 30-35.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages. At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted. The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ... Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
at least one of	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described		

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a plurality of receiver stations each of which includes	Column 3 lines 48-51.	here can permit.	Page 396 lines 8-10.
a television receiver,	Column 19 lines 28-29.	Another method has application at receiver sites such as private homes or public places like theaters, hotels, brokerage offices, etc., whether commercial establishments or not. ...and tuner, 215, to tune appropriately to "Wall Street Week."	Page 12 lines 30-35. Page 445 line 35 to page 446 line 1. Page 446 lines 17-21.
at least one output device,	Column 7 lines 50-54.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.	Page 31 lines 10-14.
a control signal detector,	Column 6 lines 48-50.	This base band signal is then transmitted through separate paths to three separate detector devices.	Page 34 line 35 to page 35 line 1.
at least one processor capable of processing a downloadable executable processor instruction, and with each said television receiver station adapted to	Column 6 lines 23-26.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1.	Page 29 lines 4-7.
		Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples. It is the further purpose of this invention to provide means and methods for the automation of ultimate receiver stations, ... Such ultimate receiver stations may be private homes or offices or commercial establishments such as theaters, hotels, or brokerage offices. ... and to tune monitor, 202M, in a predetermined fashion. In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio.... Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. This base band signal is then transferred through separate paths to three separate detector devices. Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.	

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	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	<p>Page 23 line 35 to page 24 line 16.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a</p>

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detect the presence of one or more control signals, to	Column 19 lines 63-64.	<p>This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.</p> <p>... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>particular combining.)</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>
	Column 19 lines 17-23.		<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p>
		<p>Page 26 lines 1-2.</p> <p>Page 37 line 26 to page 38 line 8.</p> <p>Page 435 lines 16-18.</p> <p>Page 267 lines 20-28 from example #5.</p> <p>Page 436 line 9 to page 437 line 3.</p>	

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generate a receiver specific signal based on said downloadable executable processor instruction, and	Column 19 line 64 to column 20 line 1.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...	Page 439 lines 14-15. Page 26 lines 4-10.	Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance. Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20. ... to receive the transmission of cable channel 13; ... Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the ...
	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the

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		generate several graphic video overlays, ...	Page 451 lines 7-11.	input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
		and to transmit these overlays to TV set, 202,	Page 26 lines 4-8.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
		upon command.	Page 44 lines 14-17.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
			Page 26 lines 20-28.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command ...
to control a device, said method comprising the steps of:	Column 7 lines 50-58.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-	Page 31 lines 10-18.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12,

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		determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.		identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
receiving at	Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
a transmitter station	Column 4 lines 5-6. Column 10 lines 15-20.	These techniques employ signals embedded in programs. The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	Page 13 lines 25-26. Page 324 lines 8-17.	The present invention employs signals embedded in programming. The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.
said downloadable executable processor instruction which is	Column 19 lines 17-23.	... processor or monitor, 12, which reacts, in a predetermined fashion by passing also externally to microcomputer, 205, all	Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...

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<p>effective at said at least one of said plurality of receiver stations to</p>	<p>signals that it passes to buffer/ comparator, 14. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>	<p>Page 267 lines 20-28 from example #5.</p> <p>Page 436 line 9 to page 437 line 3.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new- program-message (#5) and the 1st-new-radio- program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>Receiving said Select-WSW-Program- Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, ... The information so inputted is the aforementioned determine-whether- to-select instructions that contain said particular specific-WSW information and said ... enable-WSW-on-CC13...</p> <p>Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.</i> Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW -on-CC13-at-particular- 8:30 information to the controller, 20.</p>

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	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	<p>Page 439 lines 14-15.</p> <p>Page 23 line 35 to page 24 line 16.</p> <p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p>	<p>... to receive the transmission of cable channel 13; ...</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
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control said device and		Column 19 lines 23-25.	... microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X ...	Page 437 lines 1-6.	subscriber station computers in commencing loading and running information for a particular combining.) Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20. Receiving said please-fully-enable-WSW-on-CC13-at- particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
				Page 439 lines 9-15.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...
				Page 295 lines 6-8.	...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13; ...
a code or datum to serve as		Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ...	Page 439 lines 9-15.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit . Examples of signal units are a unique code identifying a programming unit, or a ...
		Column 7 lines 37-39.	... that enables buffer/comparator, 8, among other things, to assemble signal units from signal words.	Page 14 lines 27-29.	Controller, 39, 44, or 47, is preprogrammed to receive units of signal information, to assemble said units into signal words that subscriber station apparatus can receive and process, and to transfer said words to said apparatus. In each decoder, the controller, 39,

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
evidence of the	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 31 line 30 to page 32 line 6.	<p>44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. Said controller, 39, 44, or 47, has one or more output ports for communicating signal information to said apparatus.</p> <p>Fig. 3A shows one such preferred controller, 39.</p> <p>Buffer, 39C, and processor, 39D, are the second buffer and processor and perform protocol conversion functions.</p> <p>In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.</p> <p>Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said</p>

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Claim Language	Reference	Language	Reference
passing of said downloadable executable processor instruction to said device or of the functioning of said device based on said downloadable executable processor instruction;	Column 7 lines 47-49. Column 7 lines 50-60.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12. Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ... Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12. Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.
delivering said downloadable executable processor instruction to	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
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a transmitter;		Column 10 lines 43-47.	... and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.	Page 325 lines 1-4.	retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. ... apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
receiving at said transmitter station		Column 10 lines 61-64.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62. They are fed along the conventional paths described above.	Page 324 lines 23-33.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62. Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire...
one or more first control signals which at said at least one of said plurality of receiver stations operate to		Column 4 lines 5-6. Column 4 lines 14-17.	These techniques employ signals embedded in programs. The embedded signals may run and repeat continuously throughout the programming or they may run only occasionally or only once.	Page 13 lines 25-26. Page 14 lines 3-5.	The present invention employs signals embedded in programming. In programming transmissions, given signals may run and repeat, for periods of time, continuously or at regular intervals. Or they may run only occasionally or only once.

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Claim Language	Reference	Language	Reference
communicate said downloadable executable processor instruction to said at least one processor and	<i>In General</i> Column 17 lines 39- 44.	Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed , and transfer such signals to such equipment as directed .	<i>In General</i> Page 15 lines 16-23. Page 34 lines 24-26. Page 44 lines 14-15. Page 95 lines 18-21. <i>Specifically</i> Page 435 lines 16-18. Page 267 lines 20-28 from example #5.
	<i>Specifically</i> Column 19 lines 18-20.	[processor or monitor, 12, reacts] ... in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/ comparator, 14. In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ... All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions	The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; identifies the particular apparatus to which said signals are addressed , and outputs said signals to said apparatus ... A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ... Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205.

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			<p>described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In example #5, controller, 12, is preprogrammed to process monitor information, and completing the controlled functions invoked by any given message causes controller, 12, automatically to process the information of said message as monitor information, in the fashion of controller, 39, of decoder, 203, in example #3. ... Automatically, control processor, 12J, transfers to buffer/comparator, 14, via matrix switch, 12 I, header information that identifies a transmission of monitor information of a available programming then all of the information that is recorded at said SPAM-input-signal memory. (In each example #5 case, the information that is transferred--together with its newly added header information--continues to be called by its previously assigned name; for example, the 1st-old-radio-program-message (#5).)</p>	<p>Page 268 line 28 to page 269 line 12 from example #5.</p>
	<p>Column 19 lines 46-53.</p>	<p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.</p>	<p>Page 23 line 35 to page 24 line 16.</p>	<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk</p>

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<p>execute said downloadable executable processor instruction; and</p>	<p>Column 19 line 64 to column 20 line 1.</p>	<p>This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance ...</p>	<p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p> <p>Page 26 lines 1-2.</p> <p>Page 37 lines 26 to page 38 line 8.</p>	<p>inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to ... correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be</p>

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			<p>Page 26 lines 4-11.</p> <p>Page 451 line 3.</p> <p>Page 23 line 35 to page 24 line 16.</p> <p>Page 451 lines 7-11.</p>	<p>required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p> <p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance</p> <p>And the Fig. 1C combining is displayed.</p> <p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")</p> <p>... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p>

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		and to transmit these overlays to TV set, 202, upon command.	Page 26 lines 4-8. Page 44 lines 14-17. Page 26 lines 20-28.	<p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command ...</p>
transferring said one or more first control signals to said transmitter at a specific time,	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	<p>For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.</p>

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said transmitter transmitting said downloadable executable processor instruction and said one or more first control signals.	Column 19 lines 8-9.	Microcomputer, 205, is preinformed of the time of cablecasting.	Page 437 lines 1-3.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.
	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
			Page 44 lines 14-17.	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a
			Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a

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	Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	<p>Page 26 lines 1-2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>
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264. The method of claim 263, further comprising the steps of: receiving a second control signal; and	Column 11 lines 39-41.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, ...	<p>Page 328 lines 9-10.</p> <p>Page 326 lines 28-30.</p>	<p>... with information of the programming schedule, received earlier from input, 74, and/or network, 98, ...</p> <p>... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.</p>
controlling said transmitter station to perform one of said step of delivering and said step of transferring in response to said second control signal.	Column 11 lines 39-43.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 328 lines 9-13.	<p>... said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p>

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		Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 326 lines 28-30. Page 328 line 22 to page 329 line 1.	... receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
265. The method of claim 264, wherein said second control signal comprises a schedule.	Column 11 lines 39-41.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, ...	Page 328 lines 9-10. Page 326 lines 28-30.	... with information of the programming schedule, received earlier from input, 74, and/or network, 98, receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.	
266. The method of claim 264, wherein said second control signal is received in a satellite transmission.	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information,	

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			<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 324 lines 23-31.</p>	<p>received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.</p>

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Claim Language	Reference	Language	Reference
267. The method of claim 264, wherein said second control signal is received in a telephone transmission.	Column 11 lines 39-41. See Figs. 3A-C.	... the programming schedule received earlier from local input, 74, and/or from a remote site via network, 98, receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.	Page 328 lines 9-10. Page 326 lines 28-30. See Figs. 6A-B.
268. The method of claim 263, further comprising the steps of: receiving mass medium programming; and	Column 10 lines 30-39. Column 12 lines 57-61.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions. This particular embodiment describes a transmission facility transmitting only television programming. The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 324 lines 23-31. Page 339 lines 9-26.
transmitting said mass medium programming.	Column 10 lines 40-47.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire, a conventional matrix switch, 75, well known in	Page 324 line 31 to page 325 line 4.

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			the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
	Column 19 lines 43-44.	... instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
	Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
272. The method of claim 268, wherein one of said downloadable executable processor instruction and said one or more control signals is transmitted via satellite.	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
			Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
			Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
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		Column 10 lines 30-39.	<p>The facility receives programing from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programing input means, 62, can receive programing transmissions.</p>	<p>page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.</p> <p>Page 324 lines 23-31.</p>	<p>monitor ...</p> <p>The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.</p>
273. The method of claim 263, wherein a first control signals operates at said at least one of said plurality of receiver stations to communicate said downloadable executable processor instruction to said at least one processor and	Column 19 lines 46-53.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, ... upon command.	Page 23 line 35 to page 24 line 16.	<p>Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of</p>	

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>a second of said one or more first control signals operates to execute said downloadable executable processor instruction.</p>	<p>Column 19 lines 63 to column 20 line 2.</p>	<p>This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p>	<p>Page 44 lines 14-17.</p> <p>Page 26 lines 20-28.</p> <p>Page 26 lines 1-2.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>instructions that is loaded and run is called a "program instruction set.")</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)</p> <p>Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed ...</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that</p>

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				subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
			Page 26 lines 4-11.	Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
			Page 451 line 3.	And the Fig. 1C combining is displayed.
	Column 19 lines 48-53.	These signals instruct microcomputer, 205, to	Page 23 line 35 to page 24 line 16.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions ... (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
		generate several graphic video overlays, ...	Page 451 lines 7-11.	... the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.

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		and to transmit these overlays to TV set, 202, upon command.	Page 26 lines 4-8. Page 44 lines 14-17. Page 26 lines 20-28.	<p>Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.</p> <p>A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.</p> <p>(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synchron command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synchron command ...</p>
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274. A method of delivering and	Column 21 lines 30-34.	Laser system, 232, transmits one copy of the encrypted title to decryptor, 224, and one to signal processor, 200, for processing and evaluation.	<p>Page 549 line 19-21.</p> <p>Page 299 lines 19-22 from example #7.</p> <p>Page 297 lines 20-33 from example #7.</p>	<p>Then, in the fashion of example #7, apparatus of each station are caused to decrypt and retain meter information of the decryption of the encrypted information of said file.</p> <p>Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, thereby causing said decryptor, 224,....</p> <p>Subsequently, but still in the interval between said commence-enabling time and said 8:30 PM time, said program originating studio embeds in the audio portion and transmits a particular SPAM message that</p>
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Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>billing a subscriber for the</p> <p>use of control signals and computer programming</p>	<p>Column 3 line 66 to column 4 line 2.</p> <p>Column 21 lines 35-43.</p>	<p>The method provides monitoring techniques to develop data on patterns of viewership and to permit the determination of specific usage at individual receiving sites for various purposes including, for example, the billing of individual customers.</p> <p>In the encrypted title, signal processor, 200, identifies one or more signal words. If signal processor, 200, has the customer's name and address and the bookstore is a</p>	<p>Page 13 lines 1-9.</p> <p>Page 28 lines 29-35.</p> <p>Page 549 line 19-21.</p>	<p>consists of a "01" header, execution segment information that matches said enable-WSW-programming information, particular meter-monitor information, particular 1st-stage-enable-WSW-program instructions as the information segment information, and an end of file signal. (Hereinafter said message is called the</p> <p>"1st-WSW-program-enabling-message (#7).")</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at the digital detector, 38, of decoder, 30, to detect the information of said message and at the control processor, 39J,....</p> <p>It is the further purpose of this invention to provide means and methods for identifying and recording what television, radio, data, and other programming is transmitted at each transmission station, what programming is received at each receiver station, and how programming is used. In the present invention, certain monitored signals may be encrypted, and certain data collected from such monitoring may be automatically transferred from subscriber stations to one or more remote geographic stations.</p> <p>It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>Then, in the fashion of example #7, apparatus of each station are caused to decrypt and retain meter information of the decryption of the encrypted information of said file.</p>

Claim Language	Support to parent application filed November 3, 1981.	Reference	Language	Support to instant specification.	Reference	Language
		<p>retail outlet in good standing that has received from a remote site program information on the predetermined fashions in affect, signal processor, 200, decrypts the signal word or words and transfers them to decryptor, 224, to serve as the code for the first stage of decryption.</p>	<p>Page 297 line 30 to page 298 line 5 from example #7.</p>	<p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at the digital detector, 38, of decoder, 30, to detect the information of said message and at the control processor, 39J, to select the information of the execution segment in said message and determine that said selected information matches the aforementioned instance of enable-WSW-programming information at said particular controlled-function-invoking information location. So determining a match causes said control processor, 39J, to execute the aforementioned transfer-this-message-to-controller-20 instructions.</p> <p>Each farmer has a subscriber station that is identical to the station of Fig. 7 except that each station has two television recorder/players that are recorder/players, 217 and 217A; two television tuners, 215 and 215A; and a laser disk player, 232. Particular farm information of the specific farm of each farmer is recorded in a file named MY_FARM.DAT on a disk at the A: disk drive of the microcomputer, 205, of each station.</p> <p>Receiving the "1st-WSW-program-enabling-message (#7) causes controller, 20, to execute the aforementioned load-and-run-@20 instructions, to load the 1st-stage-enable-WSW- program instructions of the information segment at particular RAM of controller, 20, then to execute the information so loaded as the so-called machine language instructions of one so-called job.</p> <p>Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions,</p>	<p>Page 297 line 30 to page 298 line 5 from example #7.</p> <p>Page 534 lines 1-8.</p> <p>Page 298 lines 10-21 from example #7.</p>	<p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at the digital detector, 38, of decoder, 30, to detect the information of said message and at the control processor, 39J, to select the information of the execution segment in said message and determine that said selected information matches the aforementioned instance of enable-WSW-programming information at said particular controlled-function-invoking information location. So determining a match causes said control processor, 39J, to execute the aforementioned transfer-this-message-to-controller-20 instructions.</p> <p>Each farmer has a subscriber station that is identical to the station of Fig. 7 except that each station has two television recorder/players that are recorder/players, 217 and 217A; two television tuners, 215 and 215A; and a laser disk player, 232. Particular farm information of the specific farm of each farmer is recorded in a file named MY_FARM.DAT on a disk at the A: disk drive of the microcomputer, 205, of each station.</p> <p>Receiving the "1st-WSW-program-enabling-message (#7) causes controller, 20, to execute the aforementioned load-and-run-@20 instructions, to load the 1st-stage-enable-WSW- program instructions of the information segment at particular RAM of controller, 20, then to execute the information so loaded as the so-called machine language instructions of one so-called job.</p> <p>Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions,</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
<p>in a communication network, said network having</p> <p>a transmitter station and</p>	<p>Column 9 lines 21-22. See Fig. 1.</p>	<p>[The controller, 20] is interactive with external sources via telephone connection, 22, ...</p>	<p>Page 299 lines 13-22 from example #7.</p> <p>Page 273 lines 6-19. See Fig. 2.</p> <p>Page 273 lines 6-19.</p>	<p>to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission.</p> <p>Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224,...</p> <p>Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a particular instruct-to- receive signal. Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.</p> <p>Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Reference	Support to instant specification. Language
		<p>... can be reprogrammed from such remote sources.</p>	<p>Page 537 lines 6-17.</p>	<p>communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a particular instruct-to- receive signal. Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.</p> <p>At 3:10 AM, GMT, said <i>European master network station</i> transmits particular SPAM message information, embedded in the information of said master transmission, including a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain operating system instructions. In so doing, said European master network station inputs operating system instructions to all SPAM apparatus and receiver station computers, 73, and microcomputers, 205, thereby causing said apparatus and computers, 73 and 205, as described above in "PREPROGRAMMING RECEIVER STATION OPERATING SYSTEMS," to commence operating under control of the instructions of said operating systems.</p> <p>...particular information of said TELEPHON.EXE module that causes ... signal processor, 200, to transmit the information ... via telephone network in the fashion of example #10, to a computer at a particular remote data collection station.</p> <p>Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each farmer expects to harvest during the 2027 growing season. Automatically, the received data is</p>

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a receiver station,	Column 17 lines 47-53.	<p>FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.</p>	<p>Page 390 lines 30-35.</p> <p>aggregated, in a fashion well known in the art, at the computer of said <i>European master network</i> origination and control station ... Then, at 3:59 PM, on Thursday, February 18, 2027, the cycle of generating and communicating information of farmers is repeated ...</p>
said transmitter station transmitting control signals associated with	Column 9 lines 21-23.	<p>[The Controller, 20] is interactive with external sources via telephone connection, 22, and ...</p>	<p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.</p> <p>Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.</p> <p>Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a particular instruct-to- receive signal. Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.</p>
		... can be reprogramed from such remote sources.	<p>Page 537 lines 6-17.</p> <p>At 3:10 AM, GMT, said <i>European master network station</i> transmits particular SPAM message information, embedded in the</p>

Claim Language	Support to parent application filed November 3, 1981. Reference	Language	Support to instant specification. Reference	Language
files that contain data or programming material,	Column 21 lines 9-19.	FIG 6E could be any home or commercial establishment but is described here as a book store. Using conventional laser videodisc equipment and techniques, well known in the art, a publisher has put his full line of books on laser discs in encrypted	with respect to page 555 line 24 to page 556 line 14. Page 534 lines 13-16.	<p>information of said master transmission, including a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain operating system instructions. In so doing, said European master network station inputs operating system instructions to all SPAM apparatus and receiver station computers, 73, and microcomputers, 205, thereby causing said apparatus and computers, 73 and 205, as described above in "PREPROGRAMMING RECEIVER STATION OPERATING SYSTEMS," to commence operating under control of the instructions of said operating systems.</p> <p>...particular information of said TELEPHON.EXE module that causes ... signal processor, 200, to transmit the information ... via telephone network in the fashion of example #10, to a computer at a particular remote data collection station.</p> <p>Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each farmer expects to harvest during the 2027 growing season. Automatically, the received data is aggregated, in a fashion well known in the art, at the computer of said <i>European master network</i> origination and control station ...</p> <p>Then, at 3:59 PM, on Thursday, February 18, 2027, the cycle of generating and communicating information of farmers is repeated ...</p> <p>...Each farmer's laser disc player, 232, is loaded with a so-call "optical disk" on which is recorded a file named "PROPRIET.MOD" that contains encrypted information of a proprietary software module.</p>

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said receiver station having an input device,		form and distributed one copy of each disc to each of his authorized book store retail outlets. He has also distributed to each a conventional computer floppy disk for use on conventional microcomputer, 205, that can operate conventional laser videodisc system, 232, in a predetermined fashion to locate and transmit individual titles in his line.	Page 548 lines 24-30.	Automatically, under control of its specific received program instruction set, each microcomputer, 205, accesses the file, MY_FARM.DAT, that is prerecorded on the disk loaded at its A: disk drive and also accesses the encrypted "PROPRIET.MOD" file that is prerecorded at the laser disc player, 232, of each farmer's station....
	Column 21 lines 20-24.	A customer comes into the book store and asks to buy a title, hypothetically, <i>How to Grow Grass</i> . The salesman asks the customer for suitable identification, types into micro- computer, 205, the customer's name and address and that he wishes to purchase <i>How to Grow Grass</i> .	Page 469 lines 13-14. Page 548 lines 1-4.	... a so-called "floppy disk" that is loaded at the A: disk drive at said microcomputer, 205. Receiving the particular first SPAM message of its local intermediate station causes apparatus of the subscriber station of each farmer to execute the contained program instruction set of said message at the microcomputer, 205,....
	Column 8 lines 20-27.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.	Page 33 lines 7-20.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has a capacity for controlling the operation of all elements of the signal processor ...
	Column 9 lines 21-23.	[The Controller, 20] is interactive with external sources via telephone connection, 22, and ...	Page 273 lines 6-19.	Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of

Claim Language	Support to parent application filed November 3, 1981.	Support to instant specification.	Support to instant specification.
Reference	Reference	Reference	Reference
Language	Language	Language	Language
		<p>... can be reprogrammed from such remote sources.</p>	<p>ROM, 21, to said first computer followed by a particular instruct-to- receive signal. Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.</p> <p>At 3:10 AM, GMT, said <i>European master network station</i> transmits particular SPAM message information, embedded in the information of said master transmission, including a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain operating system instructions. In so doing, said European master network station inputs operating system instructions to all SPAM apparatus and receiver station computers, 73, and microcomputers, 205, thereby causing said apparatus and computers, 73 and 205, as described above in "PREPROGRAMMING RECEIVER STATION OPERATING SYSTEMS," to commence operating under control of the instructions of said operating systems.</p> <p>...particular information of said TELEPHON.EXE module that causes ... signal processor, 200, to transmit the information ... via telephone network in the fashion of example #10, to a computer at a particular remote data collection station.</p> <p>Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each farmer expects to harvest during the 2027 growing season. Automatically, the received data is aggregated, in a fashion well known in the art, at the computer of said <i>European master network</i> origination and control station ...</p> <p>Then, at 3:59 PM, on Thursday, February</p>

with respect to page 555 line 24 to page 556 line 14.

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communicating billing records, and	Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.	<p>Page 33 lines 18-20.</p> <p>Page 273 lines 4-6.</p> <p>Page 273 lines 21-25.</p>	<p>18, 2027, the cycle of generating and communicating information of farmers is repeated ...</p> <p>Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...</p> <p>The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.</p> <p>... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.</p>
a computer for using	Column 3 line 66 to column 4 line 2.	The method provides monitoring techniques to develop data on patterns of viewership and to permit the determination of specific usage at individual receiving sites for various purposes including, for example, the billing of individual customers.	<p>Page 13 lines 1-9.</p> <p>Page 28 lines 29-35.</p> <p>Page 534 lines 13-16.</p>	<p>It is the further purpose of this invention to provide means and methods for identifying and recording what television, radio, data, and other programming is transmitted at each transmission station, what programming is received at each receiver station, and how programming is used. In the present invention, certain monitored signals may be encrypted, and certain data collected from such monitoring may be automatically transferred from subscriber stations to one or more remote geographic stations.</p> <p>It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>... Each farmer's laser disc player, 232, is</p>

Claim Language	Support to parent application filed November 3, 1981.		Support to instant specification.	
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control signals and computer programming, said method comprising the steps of:		establishment but is described here as a book store. Using conventional laser videodisc equipment and techniques, well known in the art, a publisher has put his full line of books on laser discs in encrypted form and distributed one copy of each disc to each of his authorized book store retail outlets. He has also distributed to each a conventional computer floppy disk for use on conventional microcomputer, 205, that can operate conventional laser videodisc system, 232, in a predetermined fashion to locate and transmit individual titles in his line.	<p>loaded with a so-call "optical disk" on which is recorded a file named "PROPRIET.MOD" that contains encrypted information of a proprietary software module.</p> <p>Automatically, under control of its specific received program instruction set, each microcomputer, 205, accesses the file, MY_FARM.DAT, that is prerecorded on the disk loaded at its A: disk drive and also accesses the encrypted "PROPRIET.MOD" file that is prerecorded at the laser disc player, 232, of each farmer's station....</p> <p>... a so-called "floppy disk" that is loaded at the A: disk drive at said microcomputer, 205.</p>	
storing a file containing data or programming material;	Column 21 lines 9-19.	FIG 6E could be any home or commercial establishment but is described here as a book store. Using conventional laser videodisc equipment and techniques, well known in the art, a publisher has put his full line of books on laser discs in encrypted form and distributed one copy of each disc to each of his authorized book store retail outlets. He has also distributed to each a conventional computer floppy disk for use on conventional microcomputer, 205, that can operate conventional laser videodisc system, 232, in a predetermined fashion to locate and transmit individual titles in his line.	<p>Page 548 lines 24-30.</p> <p>Page 469 lines 13-14.</p> <p>Page 534 lines 13-16.</p> <p>Page 548 lines 24-30.</p> <p>Page 469 lines 13-14.</p>	<p>...Each farmer's laser disc player, 232, is loaded with a so-call "optical disk" on which is recorded a file named "PROPRIET.MOD" that contains encrypted information of a proprietary software module.</p> <p>Automatically, under control of its specific received program instruction set, each microcomputer, 205, accesses the file, MY_FARM.DAT, that is prerecorded on the disk loaded at its A: disk drive and also accesses the encrypted "PROPRIET.MOD" file that is prerecorded at the laser disc player, 232, of each farmer's station....</p> <p>... a so-called "floppy disk" that is loaded at the A: disk drive at said microcomputer, 205.</p>
programming said receiver station to locate, select, evaluate or decrypt said file;	Column 21 lines 9-19.	FIG 6E could be any home or commercial establishment but is described here as a book store. Using conventional laser videodisc equipment and techniques, well known in the art, a publisher has put his full line of books on laser discs in encrypted form and distributed one copy of each disc	<p>Page 534 lines 13-16.</p> <p>Page 548 lines 24-30.</p>	<p>...Each farmer's laser disc player, 232, is loaded with a so-call "optical disk" on which is recorded a file named "PROPRIET.MOD" that contains encrypted information of a proprietary software module.</p> <p>Automatically, under control of its specific</p>

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		to each of his authorized book store retail outlets. He has also distributed to each a conventional computer floppy disk for use on conventional microcomputer, 205, that can operate conventional laser videodisc system, 232, in a predetermined fashion to locate and transmit individual titles in his line.		received program instruction set, each microcomputer, 205, accesses the file, MY_FARM.DAT, that is prerecorded on the disk loaded at its A: disk drive and also accesses the encrypted "PROPRIET.MOD" file that is prerecorded at the laser disc player, 232, of each farmer's station....
	Column 8 lines 20-27.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22. The controller, 20, governs the operation of all operating elements of the apparatus.	Page 469 lines 13-14. Page 33 lines 7-20.	... a so-called "floppy disk" that is loaded at the A: disk drive at said microcomputer, 205. Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22. ... Controller, 20, has a capacity for controlling the operation of all elements of the signal processor ...
	Column 21 lines 30-34.	Laser system, 232, transmits one copy of the encrypted title to decryptor, 224, and one to signal processor, 200, for processing and evaluation.	Page 549 line 19-21. Page 299 lines 19-22 from example #7. Page 297 lines 20-33 from example #7.	Then, in the fashion of example #7, apparatus of each station are caused to decrypt and retain meter information of the decryption of the encrypted information of said file. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, thereby causing said decryptor, 224,.... Subsequently, but still in the interval between said commence-enabling time and said 8:30 PM time, said program originating studio embeds in the audio portion and transmits a particular SPAM message that consists of a "01" header, execution segment information that matches said enable-WSW-programming information, particular

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				meter-monitor information, particular 1st-stage-enable-WSW-program instructions as the information segment information, and an end of file signal. (Hereinafter said message is called the "1st-WSW-program-enabling-message (#7).") In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at the digital detector, 38, of decoder, 30, to detect the information of said message and at the control processor, 39J,....
inputting a command;	Column 21 lines 20-24.	A customer comes into the book store and asks to buy a title, hypothetically, <i>How to Grow Grass</i> . The salesman asks the customer for suitable identification, types into micro- computer, 205, the customer's name and address and that he wishes to purchase <i>How to Grow Grass</i> .	Page 548 lines 1-4.	Receiving the particular first SPAM message of its local intermediate station causes apparatus of the subscriber station of each farmer to execute the contained program instruction set of said message at the microcomputer, 205,....
selecting said file and transmitting a copy to said processor and to an output device;	Column 21 lines 30-34.	Laser system, 232, transmits one copy of the encrypted title to decryptor, 224, and one to signal processor, 200, for processing and evaluation.	Page 549 line 19-21. Page 299 lines 19-22 from example #7. Page 297 lines 20-33 from example #7.	Then, in the fashion of example #7, apparatus of each station are caused to decrypt and retain meter information of the decryption of the encrypted information of said file. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, thereby causing said decryptor, 224,.... Subsequently, but still in the interval between said commence-enabling time and said 8:30 PM time, said program originating studio embeds in the audio portion and transmits a particular SPAM message that consists of a "01" header, execution segment information that matches said enable-WSW-programming information, particular meter-monitor information, particular

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				1st-stage-enable-WSW-program instructions as the information segment information, and an end of file signal. (Hereinafter said message is called the "1st-WSW-program-enabling-message (#7).") In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at the digital detector, 38, of decoder, 30, to detect the information of said message and at the control processor, 39J,....
performing a datum check;	Column 21 lines 25-26.	Microcomputer, 205, may check to determine that the customer has no record as a pirate ...	Page 549 line 19-21 Page 16 lines 24-26. Page 293 lines 24-35.	Then, in the fashion of example #7, apparatus of each station are caused to decrypt and retain meter information of the decryption of the encrypted information of said file. Flexibility must exist for varying techniques that restrict programming to duly authorized subscribers in order to identify and deter pirates ... A match indicates that said sixteen contiguous bit locations that hold preprogrammed SPAM operating information are preprogrammed with properly. A match occurs at the station of Fig 4. (Simultaneously other stations compare information of other selected information of bit locations that contain information of said enable-CC13 instructions with information of other local bit locations that hold preprogrammed SPAM operating information. At each station where a match fails to occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion-- ...
enabling said output device to process said copy in accordance	Column 21 lines 40-43.	... signal processor, 200, decrypts the signal word or words and transfers them to decryptor, 224, to serve as the code for the	Page 299 lines 13-22.	Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor,

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with a result of said datum check; and			first stage of decryption.		224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224,...
outputting said copy.	Column 21 lines 65-66.	... and passes the decrypted programming transmission to printer or other means, 221, ...		Page 309 line 29 to page 310 line 3. Page 312 lines 12-14.	... decryptors, 224 and 231, are decrypting correctly) ... causes controller, 20, to cause the apparatus of the station of Fig. 4 to commence transferring the decrypted ... information ... to microcomputer, 205, And for example, the transmitted programming may be only audio (for example, of a radio transmission) or print (for example, of broadcast print) rather than television.
275. The method of claim 274, wherein said receiver station includes a laser disk storage device.	Column 21 lines 9-19.	FIG 6E could be any home or commercial establishment but is described here as a book store. Using conventional laser videodisc equipment and techniques, well known in the art, a publisher has put his full line of books on laser discs in encrypted form and distributed one copy of each disc to each of his authorized book store retail outlets. He has also distributed to each a conventional computer floppy disk for use on conventional microcomputer, 205, that can operate conventional laser videodisc system, 232, in a predetermined fashion to locate and transmit individual titles in his line.		Page 534 lines 13-16. Page 548 lines 24-30. Page 469 lines 13-14.	...Each farmer's laser disc player, 232, is loaded with a so-call "optical disk" on which is recorded a file named "PROPRIET.MOD" that contains encrypted information of a proprietary software module. Automatically, under control of its specific received program instruction set, each microcomputer, 205, accesses the file, MY_FARM.DAT, that is prerecorded on the disk loaded at its A: disk drive and also accesses the encrypted "PROPRIET.MOD" file that is prerecorded at the laser disc player, 232, of each farmer's station.... ... a so-called "floppy disk" that is loaded at the A: disk drive at said microcomputer, 205.

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276. The method of claim 274, wherein said receiver station includes a magnetic disk storage device.	Column 21 lines 9-19.	FIG 6E could be any home or commercial establishment but is described here as a book store. Using conventional laser videodisc equipment and techniques, well known in the art, a publisher has put his full line of books on laser discs in encrypted form and distributed one copy of each disc to each of his authorized book store retail outlets. He has also distributed to each a conventional computer floppy disk for use on conventional microcomputer, 205, that can operate conventional laser videodisc system, 232, in a predetermined fashion to locate and transmit individual titles in his line.	Page 534 lines 13-16.	...Each farmer's laser disc player, 232, is loaded with a so-call "optical disk" on which is recorded a file named "PROPRIET.MOD" that contains encrypted information of a proprietary software module.
			Page 548 lines 24-30.	Automatically, under control of its specific received program instruction set, each microcomputer, 205, accesses the file, MY_FARM.DAT, that is prerecorded on the disk loaded at its A: disk drive and also accesses the encrypted "PROPRIET.MOD" file that is prerecorded at the laser disc player, 232, of each farmer's station....
			Page 469 lines 13-14.	... a so-called "floppy disk" that is loaded at the A: disk drive at said microcomputer, 205.

277. The method of claim 276, wherein said magnetic disk storage device is a magnetic floppy disk storage device.	Column 21 lines 9-19.	FIG 6E could be any home or commercial establishment but is described here as a book store. Using conventional laser videodisc equipment and techniques, well known in the art, a publisher has put his full line of books on laser discs in encrypted form and distributed one copy of each disc to each of his authorized book store retail outlets. He has also distributed to each a conventional computer floppy disk for use on conventional microcomputer, 205, that can operate conventional laser videodisc system, 232, in a predetermined fashion to locate and transmit individual titles in his line.	Page 534 lines 13-16.	...Each farmer's laser disc player, 232, is loaded with a so-call "optical disk" on which is recorded a file named "PROPRIET.MOD" that contains encrypted information of a proprietary software module.
			Page 548 lines 24-30.	Automatically, under control of its specific received program instruction set, each microcomputer, 205, accesses the file, MY_FARM.DAT, that is prerecorded on the disk loaded at its A: disk drive and also accesses the encrypted "PROPRIET.MOD" file that is prerecorded at the laser disc player, 232, of each farmer's station....
			Page 469 lines 13-14.	... a so-called "floppy disk" that is loaded at the A: disk drive at said microcomputer, 205.

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278. The method of claim 274, wherein said receiver station includes a magnetic tape storage device.	Column 19 lines 25-27.	... and [microcomputer, 205,] may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...	Page 445 lines 24-27. Page 446 lines 18-23.	... instructions causes controller, 20, ... to switch power on to video recorder/player, 217, controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
279. The method of claim 278, wherein said magnetic tape storage device is a video cassette recorder.	Column 16 lines 25-32.	One particular advantage of these methods for monitoring programming is that, by locating the identifier signals in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded on video cassette recorders and on how people replay such recordings.	Page 319 lines 23-30.	One particular advantage of these methods for monitoring programming is that, by embedding the SPAM information in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded, for example, on video and audio cassette recorders and on how people replay such recordings.
280. A method of collecting and reporting electronic distribution of data	Column 7 lines 50-54. Column 8 lines 4-7. Column 21 lines 65-66.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16. ... and passes the decrypted programming	Page 31 lines 10-14. Page 31 line 30 to page 32 line 1. Page 309 line 29 to	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, decryptors, 224 and 231, are decrypting

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programming material		transmission to printer or other means, 221, ...	correctly) ... causes controller, 20, to cause the apparatus of the station of Fig. 4 to commence transferring the decrypted ... information ... to microcomputer, 205,	page 310 line 3.
in a communications network having	Column 9 lines 21-22. See Fig. 1.	[The controller, 20] is interactive with external sources via telephone connection, 22, ...	And for example, the transmitted programming may be only audio (for example, of a radio transmission) or print (for example, of broadcast print) rather than television. Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a particular instruct-to- receive signal. Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.	Page 312 lines 12-14. Page 273 lines 6-19. See Fig. 2.
a transmitter station and	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons. Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.	Page 390 lines 30-35. Page 396 lines 8-10.

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a receiver station,		Column 20 lines 56-57.	... that site can determine for billing purposes that the recipe was, ...	Page 44 lines 26-30.	... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...
said transmitter station having an input device for inputting a command,		Column 21 lines 20-24.	A customer comes into the book store and asks to buy a title, hypothetically, <i>How to Grow Grass</i> . The salesman asks the customer for suitable identification, types into micro- computer, 205, the customer's name and address and that he wishes to purchase <i>How to Grow Grass</i> .	Page 471 lines 26-31. Page 473 lines 3-8.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information, ... One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...
a processor for distributing said data programming material and		Column 21 lines 25-31.	Microcomputer, 205, may check to determine that the customer has no record as a pirate then transfers his name and address to buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, and instructs laser videodisc system, 232, to transmit its encrypted copy of <i>How to Grow Grass</i> to printer or other means, 221, via decryptors, 224 and 231.	Page 548 lines 1-4. Page 549 line 19-21 Page 16 lines 24-26. Page 293 lines 24-35 from example #7.	Receiving the particular first SPAM message of its local intermediate station causes apparatus of the subscriber station of each farmer to execute the contained program instruction set of said message at the microcomputer, 205,.... Then, in the fashion of example #7, apparatus of each station are caused to decrypt and retain meter information of the decryption of the encrypted information of said file. Flexibility must exist for varying techniques that restrict programming to duly authorized subscribers in order to identify and deter pirates ... A match indicates that said sixteen contiguous bit locations that hold preprogrammed SPAM operating information are preprogrammed with properly. A match occurs at the station

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collecting billing records and	Column 7 lines 59-60.	If [a signal or signals] are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 548 lines 25-30. Page 549 line 19-21. 299 lines 19-22 from example #7. Page 31 lines 18-22. Page 13 lines 1-9.	<p>of Fig 4. (Simultaneously other stations compare information of other selected information of bit locations that contain information of said enable-CC13 instructions with information of other local bit locations that hold preprogrammed SPAM operating information. At each station where a match fails to occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion-- ...</p> <p>...each microcomputer, 205, accesses the file, MY_FARM.DAT, that is prerecorded on the disk loaded at its A: disk drive and also accesses the encrypted "PROPRIET.MOD" file that is prerecorded at the laser disc player, 232, of each farmer's station ...</p> <p>Then, in the fashion of example #7, apparatus of each station are caused to decrypt and retain meter information of the decryption of the encrypted information of said file.</p> <p>Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, thereby causing said decryptor, 224,....</p> <p>If [a signal or signals] contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.</p> <p>It is the further purpose of this invention to provide means and methods for identifying and recording what television, radio, data, and other programming is transmitted at each</p>
	Column 3 line 66 to column 4 line 2.	The method provides monitoring techniques to develop data on patterns of viewership and to permit the determination of specific usage at individual receiving		

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		sites for various purposes including, for example, the billing of individual customers.		transmission station, what programming is received at each receiver station, and how programming is used. In the present invention, certain monitored signals may be encrypted, and certain data collected from such monitoring may be automatically transferred from subscriber stations to one or more remote geographic stations.	
a storage device to store said data programming material,	Column 21 lines 9-19.	FIG 6E could be any home or commercial establishment but is described here as a book store. Using conventional laser videodisc equipment and techniques, well known in the art, a publisher has put his full line of books on laser discs in encrypted form and distributed one copy of each disc to each of his authorized book store retail outlets. He has also distributed to each a conventional computer floppy disk for use on conventional microcomputer, 205, that can operate conventional laser videodisc system, 232, in a predetermined fashion to locate and transmit individual titles in his line.	Page 28 lines 29-35.	It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.	
				...Each farmer's laser disc player, 232, is loaded with a so-call "optical disk" on which is recorded a file named "PROPRIET.MOD" that contains encrypted information of a proprietary software module.	
				Automatically, under control of its specific received program instruction set, each microcomputer, 205, accesses the file, MY_FARM.DAT, that is prerecorded on the disk loaded at its A: disk drive and also accesses the encrypted "PROPRIET.MOD" file that is prerecorded at the laser disc player, 232, of each farmer's station....	
said receiver station having apparatus to receive said billing records, said method comprising the steps of:	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	Page 28 lines 25-35.	[Signal processor in Fig.7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter	

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				records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
	that site can determine for billing purposes that the recipe was,		Page 44 lines 26-30.	... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...
			Page 471 lines 26-31.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,....
			Page 473 lines 3-8.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...
	first, ordered		Page 472 lines 23-27 with	Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
			Page 471 lines 14-16.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...
	and, second, delivered.		Page 473 line 29 to Page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions

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			at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.
inputting a command at said input device at said transmitter station;	Column 21 lines 20-24.	A customer comes into the book store and asks to buy a title, hypothetically, <i>How to Grow Grass</i> . The salesman asks the customer for suitable identification, types into micro-computer, 205, the customer's name and address and that he wishes to purchase <i>How to Grow Grass</i> .	Receiving the particular first SPAM message of its local intermediate station causes apparatus of the subscriber station of each farmer to execute the contained program instruction set of said message at the microcomputer, 205,....
distributing said data programming material from said storage device at said transmitter station in response to said command from said step of inputting a command;	Column 21 lines 25-34.	Microcomputer, 205, may check to determine that the customer has no record as a pirate	Then, in the fashion of example #7, apparatus of each station are caused to decrypt and retain meter information of the decryption of the encrypted information of said file. Flexibility must exist for varying techniques that restrict programming to duly authorized subscribers in order to identify and deter pirates.... A match indicates that said sixteen contiguous bit locations that hold preprogrammed SPAM operating information are preprogrammed with properly. A match occurs at the station of Fig 4. (Simultaneously other stations compare information of other selected information of bit locations that contain information of said enable-CC13 instructions with information of other local bit locations that hold preprogrammed SPAM operating information. At each station where a match fails to occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion--....
			Page 548 lines 1-4.
			Page 549 line 19-21
			Page 16 lines 24-26.
			Page 293 lines 24-35.

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			<p>then transfers his name and address to buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, and instructs laser videodisc system, 232, to transmit its encrypted copy of <i>How to Grow Grass</i> to printer or other means, 221,</p> <p>via decryptors, 224 and 231. Laser system, 232, transmits one copy of the encrypted title to decryptor, 224,</p> <p>and one to signal processor, 200, for processing and evaluation.</p>	<p>Page 548 lines 25-30.</p> <p>Page 549 line 19-21.</p> <p>Page 299 lines 19-22.</p> <p>Page 297 lines 20-33.</p>	<p>...each microcomputer, 205, accesses the file, MY_FARM.DAT, that is prerecorded on the disk loaded at its A: disk drive and also accesses the encrypted "PROPRIET.MOD" file that is prerecorded at the laser disc player, 232, of each farmer's station...</p> <p>Then, in the fashion of example #7, apparatus of each station are caused to decrypt and retain meter information of the decryption of the encrypted information of said file.</p> <p>Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, thereby causing said decryptor, 224,....</p> <p>Subsequently, but still in the interval between said commence-enabling time and said 8:30 PM time, said program originating studio embeds in the audio portion and transmits a particular SPAM message that consists of a "01" header, execution segment information that matches said enable-WSW-programming information, particular meter-monitor information, particular 1st-stage-enable-WSW-program instructions as the information segment information, and an end of file signal. (Hereinafter said message is called the "1st-WSW-program-enabling-message (#7).")</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at the digital detector, 38, of decoder, 30, to detect the information of said message and at the control processor, 39J,....</p>
creating a billing	Column 21 lines 40-43.	... signal processor, 200, decrypts the		Page 299 lines 13-22.	Automatically, controller, 20, transfers said

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record at said transmitter station to evidence availability of said data programming material at said transmitter station;		signal word or words and transfers them to decryptor, 224, to serve as the code for the first stage of decryption.	decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224,...
	Column 7 lines 59-60.	If [a signal or signals] are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	If [a signal or signals] contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.
	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...
	Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...
	Column 3 line 66 to column 4 line 2.	The method provides monitoring techniques to develop data on patterns of	It is the further purpose of this invention to provide means and methods for identifying

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			viewership and to permit the determination of specific usage at individual receiving sites for various purposes including, for example, the billing of individual customers.		and recording what television, radio, data, and other programming is transmitted at each transmission station, what programming is received at each receiver station, and how programming is used. In the present invention, certain monitored signals may be encrypted, and certain data collected from such monitoring may be automatically transferred from subscriber stations to one or more remote geographic stations. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
				Page 28 lines 29-35.	
transmitting said billing record from said step of creating a billing record to said receiver station over a data network; and	Column 9 lines 8-13.	Digital recorder, 16, can tell the controller, 20, when it reaches predetermined levels of fullness to permit the controller, 20, to instruct auto dialer, 24, to contact an appropriate remote site allowing the recorder, 16, to output its data making memory available.		Page 33 lines 4-6. Page 272 line 26 to page 273 line 8.	Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness. In each example, ... recorder, 16, measures the quantity of its recording capacity that holds signal records, in a predetermined fashion, and determines that said quantity is equal to or greater than said particular fullness information. Said determining causes recorder, 16, to transfer a particular instruct-to-call instruction to controller, 20, that causes controller, 20, to activate telephone connection, 22, and proceed with a particular preprogrammed telephone signal record transfer sequence that is fully automatic. The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and

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				causes said dialer, 24, to dial said number.
			Page 275 line 33 to page 276 line 2.	Automatically said second computer responds with a particular transmission complete signal that causes controller, 20, to terminate said telephone call then to cause recorder, 16, to erase from memory all said meter charge information.
receiving said billing record from said step of transmitting said billing record at said receiver station from said data network.	Column 20 lines 54-56.	... when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site, ...	Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
	Column 20 lines 56-57.	... that site can determine for billing purposes that the recipe was, ...	Page 44 lines 26-30.	... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...
			Page 471 lines 26-31.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information, ...
			Page 473 lines 3-8.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message

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				that consists of ... meter-monitor information including ...
281. The method of claim 280, comprising the further steps of: storing said billing record from said step of creating a billing record at said transmitter station	Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.	Page 31 line 30 to page 32 line 1.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...
to accumulate a plurality of billing records; and	Column 8 lines 13-19.	Digital recorder, 16, may be a memory storage element of standard design. It has means for determining in a predetermined fashion how full it is and passing this information to controller, 20. The predetermined fashion may include provisions whereby recorder, 16, informs controller, 20, automatically when it reaches a certain level of fullness.	Page 32 line 34 to page 33 line 6.	Digital recorder, 16, is a memory storage element of standard design. ... In a predetermined fashion, recorder, 16, can determine how full it is and transmit this information to controller, 20. Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness.
	Column 3 line 66 to column 4 line 2.	The method provides monitoring techniques to develop data on patterns of viewership and to permit the determination of specific usage at individual receiving sites for various purposes including, for example, the billing of individual customers.	Page 13 lines 1-9.	It is the further purpose of this invention to provide means and methods for identifying and recording what television, radio, data, and other programming is transmitted at each transmission station, what programming is received at each receiver station, and how programming is used. In the present invention, certain monitored signals may be encrypted, and certain data collected from such monitoring may be automatically transferred from subscriber stations to one or more remote geographic stations.
			Page 28 lines 29-35.	It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption

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				and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
transmitting said plurality of billing records in response to said accumulated plurality of billing records reaching a predetermined amount.	Column 9 lines 8-13.	Digital recorder, 16, can tell the controller, 20, when it reaches predetermined levels of fullness to permit the controller, 20, to instruct auto dialer, 24, to contact an appropriate remote site allowing the recorder, 16, to output its data making memory available.	Page 33 lines 4-6.	Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness.
			Page 272 line 26 to page 273 line 8.	In each example, ... recorder, 16, measures the quantity of its recording capacity that holds signal records, in a predetermined fashion, and determines that said quantity is equal to or greater than said particular fullness information. Said determining causes recorder, 16, to transfer a particular instruct-to-call instruction to controller, 20, that causes controller, 20, to activate telephone connection, 22, and proceed with a particular preprogrammed telephone signal record transfer sequence that is fully automatic. The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number.
			Page 275 line 33 to page 276 line 2.	Automatically said second computer responds with a particular transmission complete signal that causes controller, 20, to terminate said telephone call then to cause recorder, 16, to erase from memory all said meter charge information.

282. The method of claim 280, comprising the further steps of: autodialing said	Column 9 lines 8-13.	Digital recorder, 16, can tell the controller, 20, when it reaches predetermined levels of fullness to permit the controller, 20, to instruct auto dialer, 24, to contact an	Page 33 lines 4-6.	Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness.
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receiver station from said transmitter station to establish a datalink between said receiver station and said transmitter station in response to said step of transmitting said billing record.			appropriate remote site allowing the recorder, 16, to output its data making memory available.	Page 272 line 26 to page 273 line 8.	In each example, ... recorder, 16, measures the quantity of its recording capacity that holds signal records, in a predetermined fashion, and determines that said quantity is equal to or greater than said particular fullness information. Said determining causes recorder, 16, to transfer a particular instruct-to- call instruction to controller, 20, that causes controller, 20, to activate telephone connection, 22, and proceed with a particular preprogrammed telephone signal record transfer sequence that is fully automatic. The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number.	
				Page 275 line 33 to page 276 line 2.	Automatically said second computer responds with a particular transmission complete signal that causes controller, 20, to terminate said telephone call then to cause recorder, 16, to erase from memory all said meter charge information.	

283. The method of claim 280, comprising the further step of: establishing a datalink from said receiver station to said transmitter station in response to a signal at said receiver station.	Column 9 lines 10-12.	... to permit the controller, 20, to instruct auto dialer, 24, to contact an appropriate remote site allowing the recorder, 16, to output its data ...	Page 272 line 26 to page 273 line 8.	In each example, ... recorder, 16, measures the quantity of its recording capacity that holds signal records, in a predetermined fashion, and determines that said quantity is equal to or greater than said particular fullness information. Said determining causes recorder, 16, to transfer a particular instruct-to- call instruction to controller, 20, that causes controller, 20, to activate telephone connection, 22, and proceed with a particular preprogrammed telephone signal record transfer sequence that is fully automatic.
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	Column 8 lines 58-62.	Control signals can be passed to the apparatus by means of the programming transmissions input at switch, 1, and mixer, 2.	Page 59 lines 29-31. Page 290 lines 26-31.	<p>The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.</p> <p>... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ...</p>
		An example of such a control signal is an instruction for the apparatus to contact a remote telephone unit.	Page 291 lines 21-24. Page 402 lines 21-26.	<p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...</p> <p>The next day, February 28, 1988 at 2:32 AM, receiving particular time information from said clock, 18, causes said controller, 20, again to cause said switch, 1, and said mixer, 3, to input the transmission of said master channel to said decoder, 30, and to cause said decoder, 30, to commence processing to detect a SPAM end of file signal.</p>
			Page 403 lines 7-12.	<p>Said message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30.</p> <p>Receiving said message causes said controller, 39, to transmit said Read-Meters-of-Selected-Stations SPAM</p>

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				<p>message to the controller, 20, of the signal processor, 200, of said station.</p> <p>Executing said ones causes controller, 20, to transmit the current reading information of utilities meter, 262, to a remote metering station computer and cause said computer to process said information. Automatically, controller, 20, ... activates telephone connection, 22; inputs a particular telephone number ...</p>
284. The method of claim 280, 281, 282 or 283, wherein said data programming material includes computer programming material.	Column 21 lines 9-19.	<p>FIG 6E could be any home or commercial establishment but is described here as a book store. Using conventional laser videodisc equipment and techniques, well known in the art, a publisher has put his full line of books on laser discs in encrypted form and distributed one copy of each disc to each of his authorized book store retail outlets. He has also distributed to each a conventional computer floppy disk for use on conventional microcomputer, 205, that can operate conventional laser videodisc system, 232, in a predetermined fashion to locate and transmit individual titles in his line.</p>	<p>Page 534 lines 13-16.</p> <p>Page 548 lines 24-30.</p>	<p>...Each farmer's laser disc player, 232, is loaded with a so-call "optical disk" on which is recorded a file named "PROPRIET.MOD" that contains encrypted information of a proprietary software module.</p> <p>Automatically, under control of its specific received program instruction set, each microcomputer, 205, accesses the file, MY_FARM.DAT, that is prerecorded on the disk loaded at its A: disk drive and also accesses the encrypted "PROPRIET.MOD" file that is prerecorded at the laser disc player, 232, of each farmer's station</p>
285. The method of claim 280, 281, 282 or 283 wherein said data programming material is distributed based on an obligation to pay and said billing record reflects the electronic distribution of said data programming material.	column 20 lines 49-58.	<p>...and thence to printer, 221, for printing. Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received. Subsequently, when signal processor, 200, transfers the data in its data recorder,</p>	<p>Page 49 lines 26-28.</p> <p>Page 50 lines 14-17.</p>	<p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <p>...unique codes for programming (other than programming identified by program unit codes) whose use obligates users to make payments (eg., royalties and residuals),....</p>

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			16, via telephone to a remote site, that site can determine for billing purposes that the recipe was, first, ordered and, second, delivered.		
286. The method of claim 280, 281, 282 or 283 wherein said data programming material includes television programming.	Column 21 lines 3-8.	FIG 6E illustrates a signaling and decryption technique which could serve to facilitate the electronic distribution of copyrighted materials such as books and movies by tending to discourage piracy and the unauthorized retransmission of copies, whether they be properly acquired or pirated.	Generally, page 312 lines 12-20. Page 306 lines 20-25.	And for example, the transmitted programming may be only audio (for example, of a radio transmission) or print (for example, of broadcast print) rather than television. And for example, the output apparatus may be speakers or one or more printers rather than a television monitor. And for example, rather than being a transmitter at a remote wireless or cable transmission station, the source of the transmission may be a local apparatus such as a video (or audio or digital information) tape recorder or a laser disc player, (By causing information that identifies the station at which encrypted information is decrypted to be so inserted, the present invention makes it possible to identify particular stations where their information is misused--for example, if pirated decrypted copies of information are distributed, the station at which decryption occurred can be identified....	
287. The method of claim 280, wherein said communication network comprises a telephone communications network.	Column 9 lines 21-23. See Fig. 1.	[The Controller, 20] is interactive with external sources via telephone connection, 22, and ...	Page 273 lines 6-19.	Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to	

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			transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a particular instruct-to- receive signal. Said instruct-to- receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.
	... can be reprogrammed from such remote sources.	Page 537 lines 6-17.	At 3:10 AM, GMT, said <i>European master network station</i> transmits particular SPAM message information, embedded in the information of said master transmission, including a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain operating system instructions. In so doing, said <i>European master network station</i> inputs operating system instructions to all SPAM apparatus and receiver station computers, 73, and microcomputers, 205, thereby causing said apparatus and computers, 73 and 205, as described above in "PREPROGRAMMING RECEIVER STATION OPERATING SYSTEMS," to commence operating under control of the instructions of said operating systems.
		with respect to page 555 line 24 to page 556 line 14. See Fig. 2.	... particular information of said TELEPHON.EXE module that causes ... signal processor, 200, to transmit the information ... via telephone network in the fashion of example #10, to a computer at a particular remote data collection station. Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each farmer expects to harvest during the 2027 growing season. Automatically, the received data is aggregated, in a fashion well known in the art, at the computer of said <i>European master</i>

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			<p><i>network</i> origination and control <i>station</i> ...</p> <p>Then, at 3:59 PM, on Thursday, February 18, 2027, the cycle of generating and communicating information of farmers is repeated ...</p>	
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<p>288. The method of claim 280, comprising the further step of: generating a bill at said receiver station in response to said step of receiving said billing record.</p>	Column 20 lines 56-57.	... that site can determine for billing purposes that the recipe was, ...	<p>Page 44 lines 26-30.</p> <p>... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information, ...</p>	<p>Page 471 lines 26-31.</p>
			<p>One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...</p>	<p>Page 473 lines 3-8.</p>

<p>289. A method for collecting and reporting the electronic distribution of programming material</p>	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	<p>Page 31 line 30 to page 32 line 6.</p> <p>Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...</p>	
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	Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.	Page 31 line 30 to page 32 line 1.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...
	Column 9 lines 8-13.	Digital recorder, 16, can tell the controller, 20, when it reaches predetermined levels of fullness to permit the controller, 20, to instruct auto dialer, 24, to contact an appropriate remote site allowing the recorder, 16, to output its data making memory available.	Page 33 lines 4-6. Page 272 line 26 to page 273 line 8.	Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness. In each example, ... recorder, 16, measures the quantity of its recording capacity that holds signal records, in a predetermined fashion, and determines that said quantity is equal to or greater than said particular fullness information. Said determining causes recorder, 16, to transfer a particular instruct-to-call instruction to controller, 20, that causes controller, 20, to activate telephone connection, 22, and proceed with a particular preprogrammed telephone signal record transfer sequence that is fully automatic. The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Automatically said second computer responds with a particular transmission complete signal that causes controller, 20, to terminate said telephone call then to cause recorder, 16, to erase from memory all said meter charge information.
in a communication	Column 9 lines 21-22.	[The controller, 20] is interactive with	Page 275 line 33 to page 276 line 2. Page 273 lines 6-19.	Controller, 20, transfers the telephone number,

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network having			external sources via telephone connection, 22, ...		1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a particular instruct-to- receive signal. Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.
a transmitter station and	Column 19 lines 60-63.		At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
				Page 25 line 34 to page 26 line 1.	At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.
				Page 90 lines 4-7. Applicants teach this as the composition of the instruction signal of page 25 line 34. See page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	The second message is of the information associated with the second combining synch command. Said second command has a "00" header, an execution segment, and a meter-monitor ...
a plurality of receiver stations,	Column 10 lines 15-20.		The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants	Page 324 lines 8-17.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants

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	as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.
	Column 17 lines 47-53.	Page 390 lines 30-35.
	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
said transmitter station having apparatus to collect data from said plurality of receiver stations,	Column 12 lines 54-56.	Page 396 lines 8-10.
	Column 20 lines 54-56.	Page 337 lines 19-21.
	... when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site, ...	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples. And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.
		[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for

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each one of said plurality of receiver stations	Column 12 lines 45-53.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programing to signal processor, 71 , and signal processor, 96 , which permits both apparatus to monitor and record all the programing transmitted by the cable television system head end facility to field distribution system, 93. Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.	Page 337 lines 1-19.	<p>programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96, which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5. By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.</p>
	Column 20 lines 49-54.	Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received.	Page 473 line 29 to page 474 line 1	<p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p>

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having a processor for detecting identification signals and establishing local use of said programming material and	Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and ...	Page 314 line 30-33.	At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus. At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....
			Page 59 lines 29-33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74,

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			<p>Page 84 lines 26-28.</p> <p>Page 28 lines 26-27.</p> <p>Page 49 lines 26-27.</p> <p>Page 337 lines 12-19.</p> <p>Page 473 line 29 to page 474 line 1</p> <p>Page 314 line 30-33.</p>	<p>and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.</p> <p>Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.</p> <p>At printer, 221, is other decoder, 227. At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically</p>

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	Column 15 lines 57-60.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each.	Page 315 lines 20-24.	inside the unit of its associated intermediate or output apparatus. Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned. Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.	
			Page 44 lines 26-32.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... monitor information that identifies what programming is available, ...	
			Page 49 line 26 to page 50 line 20.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...	
	Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.	Page 28 lines 26-27.		
	a storage device to record said local use of said programming material, said method comprising the steps of:		Page 31 line 30 to page 32 line 1.		

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transmitting programming material from said transmitter station to a plurality of receiver stations;	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	<p>Page 59 lines 29-33.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p>	
transmitting identification signals that correspond to said programming material transmitted in said step of transmitting programming material; and	Column 19 lines 60-63.	At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission.	<p>Page 59 lines 29-33.</p> <p>A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.</p> <p>At this point, an instruction signal is generated at said program originating studio, embedded in the programming transmission, and transmitted.</p> <p>The second message is of the information associated with the second combining synchronizing command. Said second command has a "00" header, an execution segment, and a meter-monitor ...</p>	

		By comparing identification signals on the incoming programming ...	page 26 lines 1-4 and 20-28, page 89 lines 3-6, and page 90 lines 4-11.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
Column 11 lines 38-39.			Page 327 line 35 to page 328 line 13.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions monitor information that identifies what programming is available, ... Meter-monitor segments contain meter information and/or monitor information.
			Page 84 lines 26-28.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C ...
Column 19 lines 14-15.		... pass all program and channel identifiers on all programming being cablecast on the multi-channel system.	Page 28 lines 26-27. Page 49 lines 26-27. Page 435 lines 16-18.	

		<p>Page 248 lines 22-26 from example #5.</p> <p>Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.</p>
		<p>Page 250 lines 13-16 from example #5.</p> <p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...</p>
		<p>Page 252 lines 15-35 from example #5.</p> <p>Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter-monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...</p>
		<p>Page 267 lines 20-28 from example #5.</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5)</p>

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receiving data from each of said plurality of receiver stations that reflect local use of said programming material transmitted in said step of transmitting programming material,		Column 9 lines 10-12.	... to permit the controller, 20, to instruct auto dialer, 24, to contact an appropriate remote site allowing the recorder, 16, to output its data ...		signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)
				Page 272 line 26 to page 273 line 8.	In each example, ... recorder, 16, measures the quantity of its recording capacity that holds signal records, in a predetermined fashion, and determines that said quantity is equal to or greater than said particular fullness information. Said determining causes recorder, 16, to transfer a particular instruct-to-call instruction to controller, 20, that causes controller, 20, to activate telephone connection, 22, and proceed with a particular preprogrammed telephone signal record transfer sequence that is fully automatic. The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number.
		Column 12 lines 54-56. Column 18 lines 36-37.	Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively. ... for recording and subsequent transmission to a remote data collection site.	Page 337 lines 19-21. Page 411 line 28 to page 412 line 2.	And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively. In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and

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wherein said data include at least a portion of said identification signals.	Column 15 lines 57-60.	The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each.	Page 419 lines 4-15.	causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in
			Page 28 lines 25-35.	In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.
			Page 315 lines 20-24.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
			Page 44 lines 26-32.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
				Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records

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		to remote ratings stations in fashions that are described more fully below.
		Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data.
		... monitor information that identifies what programming is available, ...
Column 12 lines 50-53.	Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.	By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.
Column 18 lines 30-37.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.
		Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder,
		Page 49 line 26 to page 50 line 20.
		Page 28 lines 26-27.
		Page 337 lines 12-19.
		Page 408 lines 18-29
		Page 414 lines 13-27

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		210, and inputted to said controller, 44.
		The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...
	The processors, 204 and 210, transfer this information to signal processor, 200,	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.
		Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.
		... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.
		Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.
	for recording and subsequent transmission to a remote data collection site.	In the fashion of example #3 above, receiving said first transmission of monitor information

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			<p>Page 173 line 30 to page 174 line 23 from example #3.</p> <p>Page 419 lines 4-15.</p> <p>Page 28 lines 25-35.</p>	<p>causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st" monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor</p>

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			records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
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290. The method of claim 289, comprising the further step of: generating a bill at said transmitter station to reflect the use of said transmitted programming material at one of said plurality of receiver stations.	Column 20 lines 54-58.	when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site,	Page 28 lines 25-35.	[Signal processor in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
		that site can determine for billing purposes that the recipe was,	Page 44 lines 26-30.	... meter-monitor segments. Said segments contain meter information and/or monitor information, and the information ... causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations ...
			Page 471 lines 26-31.	Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... meter-monitor information,....
			Page 473 lines 3-8.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... meter-monitor information including ...

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		first, ordered and, second, delivered.	Page 472 lines 23-27 with	Executing said instructions also causes controller, 20, to initiate a particular signal record of meter information at the buffer, 14, of signal processor, 200, which record contains particular program unit information and TV567# information.
			Page 471 lines 14-16.	Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567# ...
			Page 473 line 29 to Page 474 line 1.	Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe- ... instructions at microcomputer, 205, and to transfer particular meter-monitor information to the buffer/comparator, 14, of signal processor, 200, causing said buffer/comparator, 14, to increment the information of said signal record of meter information in the fashion described above.

291. The method of claim 289, wherein said step of receiving is from a telephone communication network.	Column 8 lines 46-50.	The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.	Page 33 lines 18-20.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...
			Page 273 lines 4-6.	The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.
			Page 273 lines 21-25.	... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.

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292. The method of claim 289, wherein at least a portion of said programming material is distributed based on an obligation to pay.	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 473 lines 3-13.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe ... instructions ...
			Page 477 lines 12-17.	... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....
			Page 477 lines 23-29.	... causes ... said decoder, 290, to detect and process properly the information of said second message.
			Page 478 lines 1-5.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
			Page 475 lines 1-2.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.
	Column 20 lines 19-26.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further ...	Page 471 lines 6-25.	Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#". Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ... --enters TV567#, in a fashion well known in the art, at the keyboard of the specific local

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				<p>input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.</p> <p>Receiving said instruction and information causes the controller, 20, at each station where TV567# is entered, in a predetermined fashion, to retain said TV567# information at particular last-local-input-# memory.</p>
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<p>293. The method of claim 289, wherein one of said identification signals in said step of transmitting identification signals are embedded into said programming material from said step of transmitting programming material.</p>	Column 4 lines 5-13.	<p>These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing, that they can convey signals to equipment that must switch manners or modes of operation during transmissions of individual units of programming, and that they can be monitored.</p>	Page 13 lines 25-32.	<p>The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing. They occur at precise times in programming and can synchronize the operation of receiver station apparatus to the timing of programming transmissions. They can be conveniently monitored.</p>
	Column 15 lines 57-60.	<p>The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programming or data unit received and the source of each.</p>	Page 315 lines 20-24.	<p>Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.</p>
			Page 44 lines 26-32.	<p>Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records</p>

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			to remote ratings stations in fashions that are described more fully below. Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data. ... monitor information that identifies what programming is available, ...
			Page 49 line 26 to page 50 line 20. Page 28 lines 26-27.

294. The method of claim 289, wherein one of said identification signals is encoded on a radio frequency carrier, said radio frequency carrier	Column 18 lines 30-35.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...	Page 408 lines 18-29 Page 414 lines 13-27 Page 15 lines 16-22	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above escribed fashion. Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains a secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44. The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the
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transmitted concurrently with said programming material from said step of transmitting program material.				Page 411 lines 10-15	transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.
				Page 418 line 23 to page 419 line 15.	Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.
		Column 18 lines 22-25.	Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly. These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.	Page 408 lines 31-34.	Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209.
				Page 410 lines 10-11.	Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency, ...
295. The method of claim 289, wherein one of said identification signals is encoded on a television frequency carrier,	Column 11 lines 38-39.	By comparing identification signals on the incoming programming ...		Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has

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said television frequency carrier transmitted concurrently with said programming material from said step of transmitting programming material.				<p>been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.</p> <p>By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.</p> <p>SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions ...</p> <p>... monitor information that identifies what programming is available, ...</p> <p>Meter-monitor segments contain meter information and/or monitor information.</p> <p>So far this disclosure has described an intermediate transmission station that transmits conventional television programming....</p>
			Page 84 lines 26-28.	
			Page 28 lines 26-27.	
	Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.	Page 49 lines 26-27. Page 339 lines 9-11.	

296. A method of processing signals to enable a subsequent television programming presentation comprising the steps of:	Column 10 lines 15-23.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of ... a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 8-24.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ... The stations so automated may transmit any form of electronically transmitted programming, including
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receiving a television signal containing television programming and	Column 10 lines 30-39.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.	Page 324 lines 23-31.	television, radio, print, data, and combined medium programming ... The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.
communicating said television signal to a storage device for storage;	Column 10 lines 40-43.	All of these received transmissions feed into the facility by hard-wire and connect, by means of conventional switches (here matrix switch, 75), to one or more video recorder/players, 76 and 78, ...	Page 324 lines 31-35.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire to a conventional matrix switch, 75, well known in the art, that outputs to one or more recorder/players, 76 and 78, ...
receiving an instruct signal which	Column 10 lines 30-39.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.	Page 324 lines 23-31.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming transmissions are received by other programming input means, 62.
is effective to control	Column 4 lines 5-6. Column 20 lines 27-36.	These techniques employ signals embedded in programs. Five minutes later,	Page 13 lines 25-26. Page 471 line 26 to	The present invention employs signals embedded in programming. Five minutes later, said program originating

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	<p>a signal is identified in the incoming programming on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.</p> <p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,</p> <p>instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...</p>	<p>studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for- entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200.</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause an instance of ...</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station.</p> <p>In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected</p>
	<p>page 472 line 17.</p> <p>Page 476 line 34 to page 477 line 8.</p> <p>Page 477 lines 8-17.</p>	

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a receiver station	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.		Page 390 lines 30-35.	converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ... Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
apparatus	<i>In General</i> Column 17 lines 39- 44.	Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed , and transfer such signals to such equipment as directed .		<i>In General</i> Page 15 lines 16-23.	The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; identifies the particular apparatus to which said signals are addressed , and outputs said signals to said apparatus ... A command is an instance of signal information that is addressed to particular subscriber station apparatus and that ... Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message to microcomputer, 205.

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and a code or datum to serve as evidence of the	<i>Specifically</i> Column 20 lines 29-30.	... which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.	<i>Specifically</i> Page 472 lines 4-12. Page 37 line 26 to page 38 line 8.	... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
	Column 2 lines 63-66.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...	Page 14 lines 27-29.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a ...
	Column 3 lines 3-8.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 32 to page 15 line 2.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
	Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 31 line 30 to page 32 line 6.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...
	Column 8 lines 4-7.	Upon determining in a predetermined	Page 31 line 30 to	Buffer/comparator, 14, receives signal

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<p>passing of said first instruct signal to a controllable device</p> <p>or of the functioning of said controllable device in response to said instruct signal;</p>	<p>Column 20 lines 27-29.</p> <p>See Fig. 6D.</p> <p>Column 20 lines 29-30.</p>	<p>fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.</p> <p>... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ...</p> <p>... which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200.</p>	<p>page 32 line 1.</p> <p>Page 471 line 35 to page 472 line 1.</p> <p>See Fig. 7D.</p> <p>Page 472 lines 4-12.</p> <p>Page 37 line 26 to page 38 line 8.</p>	<p>information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ...</p> <p>... Automatically, the controller, 39, of decoder, 145, ... transfers said message to said controller, 20.</p> <p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.</p>	
<p>selecting one of: (1) a time at which to</p>	<p>Column 11 lines 57-60.</p>	<p>Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, ...</p>	<p>Page 329 line 2-20.</p>	<p>Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information. ... Receiving said message causes computer, 73, to determine, ... that said "code" information matches ... schedule information of programming that is scheduled to be ... transmitted to the field system, 93, at a later time. So determining causes computer, 73, ...</p>	

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					to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
communicate said instruct signal; and	Column 11 lines 61-64.	... in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...		Page 329 lines 13-20.	... in its preprogrammed fashion, ... to ... record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
(2) a location to which to communicate said instruct signal;	Column 11 lines 60-61. Column 11 lines 61-64.	... controller/computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...		Page 329 lines 13-15. Page 329 lines 13-20.	So determining causes computer, 73, ... to select a video recorder/player, 76 or 78; in its preprogrammed fashion, ... to ... record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
communicating said instruct signal at said selected time or to said selected location; and	Column 11 lines 57-64.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...		Page 329 line 2-20.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field

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storing said instruct signal and said code or datum at said storage device		Column 11 lines 64-65.	... instructs the recorder/player, 76 or 78, to turn on and record the programming.		system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
		Column 16 lines 25-32.	One particular advantage of these methods for monitoring programming is that, by locating the identifier signals in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded on video cassette recorders and on how people replay such recordings.	Page 329 line 15-16. Page 319 lines 23-30.	... to cause said selected recorder, 76 or 78, to turn on and record programming, ... One particular advantage of these methods for monitoring programming is that, by embedding the SPAM information in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded, for example, on video and audio cassette recorders and on how people replay such recordings.
	based on said steps of selecting and communicating.	Column 11 lines 57-64.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, controller/ computer, 73, selects a video recorder/player, 76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...	Page 329 line 2-20.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 67. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be recorded upon receipt and transmitted to the field

			system, 93, at a later time. So determining causes computer, 73, in its preprogrammed fashion, to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
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297. An interactive method for data promotion and	Column 20 lines 19-23.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."	Page 471 lines 6-13.	Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#".
delivery for use with	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 473 lines 3-13.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe ... instructions ...
			Page 477 lines 12-17.	... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....
			Page 477 lines 23-29.	... causes ... said decoder, 290, to detect and process properly the information of said second message.
			Page 478 lines 1-5.	(Whichever transmission method is employed

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an interactive mass medium programming output apparatus comprising the steps of:	Column 17 lines 47-53.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site. Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	<p>the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)</p> <p>Receiving said output information causes printer, 221, to print the information of said specific recipe and list.</p> <p>Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.</p> <p>Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.</p>
outputting mass medium programming that promotes data, said interactive mass medium programming output apparatus having	Column 20 lines 19-23.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."	<p>Page 475 lines 1-2.</p> <p>Page 390 lines 30-35.</p> <p>Page 396 lines 8-10.</p>
an input device to receive input from a subscriber;	Column 20 lines 23-26.	The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...	<p>Page 471 lines 6-13.</p> <p>Page 471 lines 14-21.</p>

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<p>prompting said subscriber during said step of outputting, said mass medium programming including audio, whether said subscriber wants said data promoted in said step of displaying, said interactive mass medium programming</p> <p>output apparatus having an output device for outputting said data;</p>	Column 20 lines 19-23.	Halfway through the program, the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input."	Page 471 lines 6-13.	the signal processor, 200, of said station. Halfway through the program the host says, "If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen." The information that appears on the screen of each subscriber is "TV567#".
	Column 20 lines 46-49.	When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.	Page 473 lines 3-13.	One minute later, said program originating studio embeds in the transmission of said "Exotic Meals of India" programming and transmits a particular second SPAM message that consists of ... generate-recipe-... instructions ...
			Page 477 lines 12-17.	... selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to ... link ... said selected converter box, 222, and said decoder, 290; ... said decoder, 290, to receive said transmission....
			Page 477 lines 23-29.	... causes ... said decoder, 290, to detect and process properly the information of said second message.
			Page 478 lines 1-5.	(Whichever transmission method is employed the information of said second message can be encrypted and caused to be decrypted in any of the methods described above--for example, in the method of the first message of example #4.)
			Page 475 lines 1-2.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.

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<p>receiving a reply from said subscriber at said input device in response to said step of prompting said subscriber, said interactive mass medium programming output apparatus having</p>	<p>Column 20 lines 23-26.</p> <p>The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, ...</p>	<p>Page 471 lines 14-21.</p> <p>Each subscriber--in particular, the subscriber of the station of Figs. 7 and 7F, ...--enters TV567#, in a fashion well known in the art, at the keyboard of the specific local input, 225, of his own station which causes said input, 225, to transmit a particular preprogrammed process-local-input instruction and said TV567# information to the controller, 20, of the signal processor, 200, of said station.</p>
<p>a processor for processing said subscriber reply and controlling delivery of said data in response to instructions;</p>	<p>Column 20 lines 31-36.</p> <p>This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form ...</p>	<p>Page 471 line 26 to page 472 line 17.</p> <p>Five minutes later, said program originating studio embeds in the transmission of the "Exotic Meals of India" programming and transmits a particular first SPAM message that consists of ... check-for-entered-information-and-process instructions, ...</p> <p>At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred to the controller, 20, of signal processor, 200. ...</p> <p>Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-memory ...</p>
		<p>Page 476 line 34 to page 477 line 8.</p> <p>(An alternate method for inputting said second message to the microcomputers, 205, at stations where TV567# is entered at a local input, 225, is to embed said message in a particular second transmission that is different from the transmission of said "Exotic Meals of India" programming and to cause a selected All signal decoder, 290, at each one of said stations to receive said</p>

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				Page 477 lines 8-17.	second transmission, thereby causing said decoder, 290, to detect and transfer the information of said second message to the microcomputer, 205, of said station. In this alternate method, ... said first SPAM message causes controller, 20, of signal processor, 200, of each one of said stations to cause the tuner, 223, of a selected converter box, 222, to tune said box, 222, to receive said second transmission; to cause the matrix switch, 258, to establish a programming communication link between said selected converter box, 222, and said decoder, 290; to cause the appropriate receiver apparatus of said decoder, 290, to receive said transmission ...
delivering said instructions at said interactive mass medium programming output		Column 7 lines 39-49.	In a pre-determined fashion, buffer/comparator, 8, identifies signal words and/or signal units that must be decrypted, either in whole or in part, and passes identified signal words and/or units to decrypter, 10. Decrypter, 10, uses conventional decrypter techniques, well known in the art, in a pre-determined fashion to decrypt such signals as required. Decrypter, 10, then passes the decrypted signals to processor or monitor, 12. Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 472 lines 13-23.	Receiving said message causes controller, 20, to load and execute said check-for-entered-information-and-process instructions, and executing said instructions causes controller, 20, to determine that TV567# information exists at said last-local-input-# memory and to cause an instance of particular covert control information (which is preprogrammed in said instructions) to be placed at particular control-function-invoking information memory of the controller, 39, of decoder, 145, and also at particular control-function-invoking information memory of the controller, 39, of decoder, 203. At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred ..
apparatus in response to said step of receiving a reply,		Column 20 lines 31-33.	... that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion,	Page 472 lines 16-17.	controller, 20, to determine that TV567# information exists at said last-local-input-# memory ...

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said instructions controlling said interactive mass medium programming output apparatus;		Column 7 lines 50-54.	... Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.	Page 472 lines 27-32. Page 31 lines 10-14.	(At stations where TV567# information does not exist at last-local-input-# memory of the controllers, 20, said instructions cause said controllers, 20, to cease executing and delete all information of said instructions without placing any information at the decoders, 145 and 203, ... Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both.
processing said instructions from said step of delivering, said instructions being effective to control a receiver station apparatus and		Column 7 lines 50-60.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 31 lines 10-22.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.
store a code or datum to serve as evidence of the		Column 6 lines 23-30.	A signal processor apparatus for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input is shown in Figure 1. As shown, the input signals are the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local	Page 29 lines 4-15.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input. ... The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local

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	Column 8 lines 4-7.	<p>television antenna of conventional design.</p> <p>Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.</p>	<p>Page 31 line 30 to page 32 line 1.</p>	<p>television antenna of conventional design.</p> <p>Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...</p>
	Column 8 lines 46-50.	<p>The controller, 20, also inputs the digital recorder, 16, to direct it to output the information from the memory of the recorder, 16, to telephone connection, 22, and thence to the collection site at the remote geographical location.</p>	<p>Page 33 lines 18-20.</p>	<p>Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...</p>
passing of an instruct signal to a controllable device or			<p>Page 273 lines 4-6.</p>	<p>The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.</p>
			<p>Page 273 lines 21-25.</p>	<p>... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.</p>
	Column 7 lines 47-49.	<p>Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.</p>	<p>Page 30 lines 29-30.</p>	<p>Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.</p>
of the functioning of said controllable device in response to an instruct signal; and	Column 7 lines 50-60.	<p>Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both. If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are</p>	<p>Page 31 lines 10-22.</p>	<p>Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both. If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers</p>

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		addressed and passes them to appropriate jack ports for external transmission. If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.		them to the appropriate port or ports for external transmission. If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.
delivering said data	Column 20 lines 48-49.	... and thence to printer, 221, for printing.	Page 475 lines 1-2.	Receiving said output information causes printer, 221, to print the information of said specific recipe and list.
on the basis of said instructions.	Column 20 lines 33-36. Column 20 lines 36-37.	... instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form and instruct control means, 226, to activate printer, 221.	Page 473 lines 18-31.	Automatically, the controller, 39, of decoder, 145, transmits particular switching request information to the control processor, 20A, of signal processor, 200, via the aforementioned control information bus means. Receiving said information causes control processor, 20A, to cause matrix switch, 259, to establish a communications link between the controller, 39, of decoder, 145, and the controller, 39, of decoder, 203. Automatically, said controller, 39, of decoder, 145, transfers said message to the controller, 39, of decoder, 203. Receiving said message causes the controller, 39, of decoder, 203, to load and execute said generate-recipe-and-shopping-list instructions at microcomputer, 205, ...

298. The method of claim 297, wherein at least one of said instructions is embedded in the non-visible or non-audible portion of a mass medium programming signal.	Column 20 lines 27-29. Column 4 lines 5-6. Column 4 lines 18-22.	... a signal is identified in the incoming programming on TV set, 202, by decoder, 203, ... These techniques employ signals embedded in programs. In television they may appear on one line in the video portion of the transmission, or on a portion of one line, or on more than one line, and will probably lie outside the range	Page 471 line 35 to page 472 line 1. Page 13 lines 25-26. Page 14 lines 6-11.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, ... The present invention employs signals embedded in programming. In television they may appear on one line in the video portion of the transmission such as line 20 of the vertical interval, or on a portion of one line, or on more than one line, and they
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		of the television picture displayed on a normally tuned television set.		will probably lie outside the range of the television picture displayed on a normally tuned television set.
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299. The method of claim 297, wherein at least one of said instructions is delivered in a multichannel signal transmitted over a broadband network, said method further comprising the step of	Column 20 lines 16-19.	Suppose a viewer watches a television program on cooking techniques that is received on TV set, 202, via box, 201. Julia Child's "The French Chef" is one such program.	Page 470 lines 1-3 and Page 470 lines 9-12.	...transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is ...
demodulating a carrier to receive at least one of said instructions.	Column 6 lines 45-48.	The television channel signal is then transmitted to a standard amplitude demodulator, 32, which uses standard demodulator techniques well known in the art to define the television base band signal.	Page 470 lines 19-21.	... to display the television information of said transmission (that is, information of said audio and video) at monitor, 202M.
			Page 34 lines 31-35.	The television channel signal then passes to a standard amplitude demodulator, 32, which uses standard demodulator techniques, well known in the art, to define the television base band signal.

300. The method of claim 297, wherein at least one of said instructions is delivered in a multichannel signal transmitted via a satellite mass medium programming transmitter station, said method further comprising the step of	Column 11 lines 50-57.	... if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 22 to page 329 line 1.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information and the added source mark information of said message identifies distribution amplifier, 63. Receiving said message causes computer, 73, to determine, in a predetermined fashion, that said "code" information matches particular preprogrammed schedule information of programming that is scheduled to be retransmitted immediately upon receipt to
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demodulating a carrier to receive at least one of said instructions.		Column 6 lines 45-48.	The television channel signal is then transmitted to a standard amplitude demodulator, 32, which uses standard demodulator techniques well known in the art to define the television base band signal.	Page 34 lines 31-35.	field distribution system, 93, via cable channel modulator, 87. In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87. The television channel signal then passes to a standard amplitude demodulator, 32, which uses standard demodulator techniques, well known in the art, to define the television base band signal.
301. The method of claim 297, further comprising the steps of: storing a subscriber instruction to receive at least one specific mass medium program,		Column 19 lines 5-8.	In another example, microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast.	Page 428 lines 21-26.	The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.
datum,		Column 18 lines 46-48.	... microprocessor, 205, is programmed to hold a portfolio of stocks and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 3-6.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks and to receive and process automatically news items about said stocks and about the industries of said stocks.
news item, or		Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
computer control instructions; and		Column 18 lines 59-62.	When [signal processor, 200] identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205.	Page 422 line 33 to Page 423 line 10.	to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said A T & T news item.) ...cause said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transceiving means and to continue functioning in the fashion of example #5.
receiving said at least one specific mass medium program,		Column 19 lines 27-29.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	... instructions causes controller, 20, to switch power on to monitor, 202M, and commence transferring the television output transmission of microcomputer, 205, to said monitor, 202M; ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M, and to tune monitor, 202M, in a predetermined fashion.
said datum,		Column 19 lines 39-41.	[Microcomputer, 205,] records those prices that relate to the stocks in its stored portfolio.	Page 446 lines 17-21. Page 449 lines 13-20.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio ... Each weekday after 4:30 PM, a remote stock-price-data- transmission station transmits all closing stock price data

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said news item, or		Column 18 lines 65-67.	... and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing ...	Page 426 lines 10-18.	applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)
said computer control instruction in accordance with said subscriber instruction.		Column 18 lines 59-62.	When [signal processor, 200] identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205.	Page 422 line 33 to Page 423 line 10.	...cause said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.
302. The method of claim 297, wherein information indicating the availability, use or		Column 18 lines 30-41.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and 210 respectively, determine to identify the	Page 408 lines 18-29	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains the

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usage of said mass medium programming or said data are stored or communicated to a remote data collection station, said method further comprising the step of selecting evidence information that identifies or designates one selected from the group consisting of:	programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,	<p>"program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ...</p> <p>Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p>
		Page 414 lines 13-27
		Page 15 lines 16-22
	The processors, 204 and 210, transfer this information to signal processor, 200,	Page 36 lines 32-33.
		Page 38 lines 11-14.
		Page 411 lines 10-15

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Language	Language	Language
		<p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")</p> <p>In the fashion described above, receiving said third transmission of monitor information ...</p>
	<p>for recording and subsequent transmission to a remote data collection site.</p>	<p>Page 418 line 23 to page 419 line 15.</p> <p>Page 411 line 28 to page 412 line 2.</p> <p>Page 173 line 30 to page 174 line 23 from example #3.</p> <p>Page 419 lines 4-15.</p>

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
			<p>Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.</p>	<p>Page 28 lines 25-35.</p>	<p>causes said onboard controller, 14A, to initiate a third signal record, ... that is based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.</p> <p>Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...</p>
(1) mass medium programming;	<p>Column 15 lines 62-63.</p> <p>Column 16 lines 32-35.</p>	<p>[The signals for which the decoders are monitoring] may convey unique identifier codes for each program or commercial.</p> <p>For example, a person might instruct video cassette recorder, 135, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.</p>	<p>Page 49 lines 26-28.</p> <p>Page 50 lines 6-7.</p> <p>Page 319 lines 30-33.</p>	<p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <p>...unique identifier codes for each program unit (including commercials);</p> <p>For example, a subscriber might instruct video recorder/player, 217, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.</p>	
(2) a use of programming;	Column 18 lines 30-35.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals	Page 408 lines 18-29	Periodically thereafter, said program originating studio embeds in said transmission	

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		that monitors or processors, 204 and 210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned, ...		and transmits a ... message that consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.
(3) a transmission station;	Column 15 lines 60-62.	[The signals for which the decoders are monitoring] may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Page 49 lines 26-28. Page 50 lines 1-4.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... origins of transmissions (eg., network so source stations, broadcast stations, cable head end stations); dates and times ...
(4) a receiver station;	Column 16 lines 56-61.	... and, in a predetermined fashion, create a signal string by appending digital information to the received signal which information might	Page 180 lines 1-3. Page 297 line 15. Page 180 lines 4-15.	Then said process-monitor-info instructions cause onboard controller, 14A, to initiate a new monitor record that reflects the new "Wall Street Week" programming. ...creating a meter record that records the decryption.... Automatically, said instructions cause onboard controller, 14A, in a predetermined fashion, to delete ... except the source mark information associated with said record; to record information of said first named instance of "program unit identification code" information (which is the "program unit identification code" of said "Wall Street Week" program to a particular "program unit identification code" location at said record location; to select particular information located at said SPAM-input-signal-@14A register memory and record information at said record location; to select particular preprogrammed record....
		identify the individual decoder, 131, 136,	Page 181 lines 8-14.	In a predetermined fashion, onboard

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	Reference	Language	Reference	Language
		138, 143, 145, 147, 149, or 150 and the time of receipt at signal processor, 130.		controller, 14A, also records in a particular monitor record field location at said record location a particular display unit identification code that identifies monitor, 202M, as the display apparatus of said new monitor record. In a predetermined fashion, signal processor, 200, records date and time information received from clock, 18, in first and last particular time field...
(5) a network;	Column 16 lines 32-35. Column 16 lines 39-41.	For example, a person might instruct video cassette recorder, 135, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City. Each discrete bit of this information could be conveyed to recorder, 135, in a signal unit or units in the programming so received and recorded.	Page 319 lines 30-33. Page 320 lines 2-8.	For example, a subscriber might instruct video recorder/player, 217, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City. Each discrete bit of this information could be transmitted to the subscriber station of Fig. 5 in meter-monitor information ... embedded in the transmitted programming. So embedding and transmitting said meter-monitor information would cause recorder, 217, to record said information.
(6) a broadcast station;	Column 15 lines 60-62.	[The signals for which the decoders are monitoring] may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Page 49 lines 26-28. Page 50 lines 1-4.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... origins of transmissions (eg., network so source stations, broadcast stations, cable head end stations); dates and times ...
(7) a channel on a cable system;	Column 16 lines 35-41.	Recorder, 135, might receive the programming over Manhattan Cable TV channel 4 and record the programming from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each discrete bit of this information could be conveyed to recorder, 135, in a signal unit or units in the programming so received and recorded.	Page 319 line 33 to page 320 line 8.	Recorder, 217, might receive the programming over Manhattan Cable TV channel 4 and record the programming at the time of original broadcast transmission--from 7:00 PM to 7:30 PM on the evening of July 15, 1985. Each discrete bit of this information could be transmitted to the subscriber station of Fig. 5 in meter-monitor information ... embedded in the transmitted programming.

Claim Language		Support to parent application filed November 3, 1981.		Support to instant specification.	
		Reference	Language	Reference	Language
					So embedding and transmitting said meter-monitor information would cause recorder, 217, to record said information.
(8) a time of transmission;	Column 15 lines 60-62.	[The signals for which the decoders are monitoring] may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.		Page 49 lines 26-28. Page 50 lines 1-4.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... origins of transmissions (eg., network so source stations, broadcast stations, cable head end stations); dates and times ...
(9) a unique identifier datum;	Column 15 lines 62-63.	[The signals for which the decoders are monitoring] may convey unique identifier codes for each program or commercial.		Page 49 lines 26-28. Page 50 lines 6-7.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include: ... unique identifier codes for each program unit (including commercials);
(10) a source or supplier of data;	Column 4 lines 5-6.	These techniques employ signals embedded in programs.		Page 13 lines 25-26.	The present invention employs signals embedded in programming.
(11) a distributor or an advertisement; and	Column 15 lines 65-68.	In the case of data received at the printer, [the signals for which the decoders are monitoring] may identify publications, articles, publishers, distributors, advertisements, etc.		Page 321 lines 1-6. Page 360 lines 31-34. Page 496 lines 12-13.	Prerecorded, commercially distributed video and audio tapes, videodiscs, so-called "compact discs" of audio, and so-called "CD ROM" discs of data can also contain unique codes, embedded in the prerecorded programming, that identify the use and usage of said programming when said tapes or discs are played. For example, laser disc player, 232, can For example, another of the aforementioned discounts and cents-off coupon specials is of a particular product ... that is advertised ... At printer, 221, the printed so-called "hard copy" of said offer and coupon information emerges as:

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			Page 496 lines 28-35.	<p>.....</p> <p>15 cents off 15 cents off</p> <p>Nabisco Zweiback Teething Toast</p> <p>.....</p>
(12) an indication of a payment obligation.	column 20 lines 49-58.	<p>...and thence to printer, 221, for printing. Other signal decoder, 227, identifies a signal in the transmission received by printer, 221, which it passes via processor, 228, and buffer/comparator, 14, of signal processor, 200, to data recorder, 16. This signal indicates that the recipe, itself, has been received. Subsequently, when signal processor, 200, transfers the data in its data recorder, 16, via telephone to a remote site, that site can determine for billing purposes that the recipe was, first, ordered and, second, delivered.</p>	<p>Page 49 lines 26-28.</p> <p>Page 50 lines 14-17.</p>	<p>Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:</p> <p>...unique codes for programming (other than programming identified by program unit codes) whose use obligates users to make payments (eg., royalties and residuals);....</p>

APPENDIX B

**PATENTABLE SUBJECT MATTER OF
INSTANT CLAIMS OVER
APPLICANTS' PATENTED CLAIMS**

The following charts provide a claim by claim comparison of each of Applicants' instant independent claims to of Applicant's independent patented claims³² as specified in Appendix A of the Office Action. The Office Action stated in paragraphs 22-23 that claims 2-14 & 16-302 are rejected under the judicially created doctrine of obviousness-type double patenting over any single claim or combination of claims of every claim of Applicants' six issued patents. However, the Office Action only compared five of Applicants' patented claims to Applicants' instant independent claims³³. There was no other analysis to any other of Applicants' patented claims with those of the instant application.

Applicants provide an analysis in Appendix B to show that the instant independent claims are patentably distinct from the specified patented independent claims in Appendix A of the Office Action.

For the Examiner's convenience only, Applicants have underlined portions in the left columns of the instant independent claims to designate the clearest and most succinct portions of the claim language that Applicants believe are patentably distinct from the patented independent claims in the right columns. Applicants assert that any lack of underlining in the instant independent claims in no way indicates these portions are common to the subject matter of the patented claims.

³² Claim 3 of U.S. Pat. No. 4,704,725, Claim 1 of U.S. Pat. No. 5,109,414, & Claim 1 of U.S. Pat. No. 4,694,490, Claim 44 of U.S. Pat. No. 5,335,277, and Claim 14 of U.S. Pat. No. 4,965,825.

³³ Applicants instant independent claims 2, 13, 21, 25-26, 29, 31, 36, 44, 46, 50, 54, 58, 61, 63, 73, 83, 90, 93 & 122.

Instant Independent Claims Patentable Subject Matter over Applicants' Patented Claims

Application Claim 2	U.S. Pat. No. 4,694,490, Claim 1
<p>2. A method of gathering information on the use of a control signal at a receiver station, said receiver station having a plurality of inputs, a processor, and a least one controllable device, said receiver station transferring said gathered information to a remote station, said method comprising the steps of:</p> <p><u>identifying a control signal;</u> <u>searching for said control signal in an input data stream based on said step of identifying;</u> <u>passing said control signal from said processor to said at least one controllable device based on said step of searching; and</u> <u>communicating information on the passing of said control signal from said receiver station to said remote station.</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers, transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed, receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations, detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>

Application Claim 13	U.S. Pat. No. 4,694,490, Claim 1
<p>13. <u>A multimedia receiving apparatus for gathering information on the use of a signal at said apparatus comprising:</u> <u>a plurality of input ports for receiving multimedia signals;</u> <u>an output port;</u> <u>a processor operatively connected to said plurality of input ports and said output port; said processor programmed for:</u> <u>identifying a signal from at least one of said plurality of input ports;</u> <u>passing said signal from said processor to said output port based on said step of identifying;</u> <u>communicating information of the passing of said identified signal based on said step of passing.</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers, transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,</p>

Instant Independent Claims Patentable Subject Matter over Applicants' Patented Claims

	<p>receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,</p> <p>detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>
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Application Claim 21	U.S. Pat. No. 4,694,490, Claim 1
<p>21. A method of communicating subscriber station information from a subscriber station to at least one remote collection station, said method comprising the steps of:</p> <p><u>inputting an instruct signal which is effective at said subscriber station to control an apparatus and at least one of a code and a datum to serve as evidence of at least one of passing of said instruct signal to a controllable apparatus and functioning of said controllable apparatus in response to said instruct signal;</u></p> <p><u>detecting the presence of at least one of an instruction and said at least one of a code and a datum, which is effective at said subscriber station to at least one of (i) generate at least one of subscriber station specific datum and (ii) select and assemble a plurality of subscriber station specific data into a record;</u></p> <p><u>processing at the subscriber station at least one locally inputted datum and performing, in response to said detected at least one of an instruction and said at least one of a code and a datum, at least one of:</u></p> <p><u>(a) communicating said generated at least one subscriber station specific data to a transmitter; and</u></p> <p><u>(b) communicating said record and said selected specific plurality of subscriber specific data to a transmitter; and</u></p> <p><u>transmitting at least one of said communicated at least one generated subscriber station specific datum and said communicated record and plurality of subscriber specific</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,</p> <p>transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,</p> <p>receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,</p> <p>detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>

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data to said at least one remote collection station.	
Application Claim 25	U.S. Pat. No. 4,694,490, Claim 1
<p>25. A method of signal processing at a receiver station, said receiver station including a receiver and a processor, said method comprising the steps of:</p> <p><u>receiving at said receiver identification signals that identify specific signal content for at least one of a plurality of one of concurrent broadcast and cablecast signal transmissions;</u> <u>providing a comparison signal to said processor;</u> <u>comparing said comparison signal to said identification signals and generating a control signal identifying a desired one of said plurality of one of broadcast and cablecast signal transmission based on said step of comparing;</u> <u>tuning said receiver, based on said generated control signal, to receive said desired one of said plurality of one of broadcast and cablecast signal transmissions;</u> <u>inputting at least a portion of said desired signal transmission to said processor; and</u> <u>responding to (i) an instruct signal detected in said desired signal transmission which is effective to control a receiver station apparatus and (ii) a code or datum to serve as evidence of the passing of said instruct signal to a controllable apparatus or of the functioning of a controllable apparatus in response to said instruct signal.</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers, transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed, receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations, detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>
Application Claim 26	U.S. Pat. No. 4,694,490, Claim 1
<p>26. A method of controlling a remote intermediate transmitter station to communicate at least one instruct signal to at least one receiver station, with said remote transmitter station including at least one of a broadcast and cablecast transmitter signal which is effective at a receiver station to instruct one of a computer and a processor, a plurality of selective transfer devices each operatively connected to said at least one of said broadcast and said cablecast transmitter, a receiver for receiving said at least one instruct signal from at least one origination transmitter station a control signal detector, and one of a controller and computer capable of controlling at least one of said plurality of selective transfer devices, and with said remote transmitter station adapted to detect the presence of at least one control signal, and to deliver at said at least one of said</p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p>

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broadcast and said cablecast transmitter said at least one instruct signal, said method comprising the steps of: receiving said at least one instruct signal and at least one of a code and a datum at said at least one origination transmitter station and delivering said at least one instruct signal and said at least one of said code and said datum to at least one origination transmitter, said at least one instruct signal being operative at said at least one receiver station to control at least one controllable apparatus, said at least one of said code and said datum being operative at said at least one receiver station to serve as evidence of at least one of passing of said at least one instruct signal to said at least one controllable apparatus and functioning of said at least one controllable apparatus in response to said at least one instruct signal; receiving said at least one control signal which at said remote intermediate data transmitter station operates to control the communication of said at least one instruct signal and said at least one of said code and said datum; and transmitting said at least one control signal to said at least one origination transmitter before a specific time.

transmitting a video signal containing a television program signal to said receivers,
transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,
receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,
detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.

Application Claim 29	U.S. Pat. No. 4,694,490, Claim 1
<p>29. A method of processing signals at a receiver station having a computer and a television monitor to deliver at the television monitor at least one of a combined and sequential presentation of a program and a user specific output, said method comprising the steps of:</p> <p><u>storing user data of interest;</u> <u>receiving from a television programming source an information transmission containing television programming;</u> <u>transferring said television programming to said television monitor and displaying the television programming;</u> <u>detecting in said information transmission at least one instruct signal which is operative to control a receiver station apparatus and at least one of a code and a datum to serve as evidence of (i) a passing of said at least one instruct signal to at least one controllable apparatus and (ii) the functioning of said at least one controllable apparatus in response to said at least one instruct signal;</u> <u>controlling said computer based on said detected at least one instruct signal, said step of controlling comprising:</u> <u>selecting at least a portion of said stored user data of</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers, transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed, receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations, detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the</p>

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<u>interest;</u> <u>communicating said selected at least said portion of said</u> <u>stored user data of interest to said television monitor;</u> <u>and subsequently</u> <u>ceasing to communicate said select at least said portion</u> <u>to said television monitor; and</u> <u>evidencing said said functioning of said at least one</u> <u>controllable apparatus is response to said at least one</u> <u>instant signal by storing said at least one of said code</u> <u>and said datum in a record.</u>	selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.
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Application Claim 31	U.S. Pat. No. 4,694,490, Claim 1
31. A method of generating and encoding signals to control a presentation comprising the steps of: <u>receiving and storing a program that contains video information;</u> <u>receiving at least one instruction and at least one of code and a datum, said at least one instruction having effect at a user station to control at least one controllable apparatus, said at least one of said code and said datum having effect at said user station to serve as evidence of at least one of passing of said at least one instruction to said at least one controllable apparatus and at least one function performed by said at least one controllable apparatus in response to said at least one instruction ;</u> <u>encoding said at least one instruction, wherein said step of encoding translating said at least one instruction to at least one control signal, said at least one control signal for directing a processor at said user station to control said at least one controllable apparatus;</u> <u>storing said at least one control signal from said step of encoding in conjunction with said program; and</u> <u>storing said at least one of said code and said datum from said step of receiving in conjunction with said program and said at least one control signal.</u>	1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of: transmitting a video signal containing a television program signal to said receivers, transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed, receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations, detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.

Application Claim 36	U.S. Pat. No. 4,694,490, Claim 1
36. A method of controlling a network having a plurality of receiver stations each of which includes a broadcast or cablecast signal receiver, at least one processor, a signal detector, said signal detector adapted to receive signals from a broadcast or cablecast signal, said processor programmed to respond to signals from said detector, said method comprising the steps of:	1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at

receiving at at least one of a broadcast and a cablecast transmitter station (i) at least one instruct signal which is effective at said plurality of receiver stations to control at least one controllable apparatus and (ii) at least one of a code and a datum to serve as evidence of at least one of passing of said at least one instruct signal to at least one controllable apparatus and functioning of said at least one controllable apparatus in response to said at least one instruct signal;
transferring said at least one instruct signal and said at least one of said code and said datum to at least one transmitter;
receiving at least one control signal at said transmitter station, said control signal designating at least one receiver station of said plurality of receiver stations in which said at least one instruct signal is addressed; and
transmitting said at least one control signal from said at least one transmitter, said at least one transmitter at least one of broadcasting and cablecasting said at least one instruct signal, said at least one of said code and said datum, and said at least one control signal to said plurality of receiver stations.

least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:
transmitting a video signal containing a television program signal to said receivers,
transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,
receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,
detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.

Application Claim 44	U.S. Pat. No. 5,335,277, Claim 44
<p>44. <u>A method of delivering and gathering information on the use of a signal in a communication network, said network having a transmitter station and a receiver station, said transmitter station communicating commands directed to a computer program at said receiver station, said receiver station having an input device, a processor for transmitting information to a remote collection station and a computer for storing data and controlling presentations, said method comprising the steps of:</u> <u>selecting a media program from a plurality of media on the basis of a subscriber program;</u> <u>outputting said selected media program from said step of selecting a media at said receiver station;</u> <u>inputting a command at said input device in response to a command communicated in said selected media program;</u> <u>receiving at said receiver station a control signal from an external source;</u> <u>controlling a presentation of a unit of said selected media program at a peripheral device to said computer in accordance with said control signal based on said step of inputting; and</u> <u>communicating from said receiver station to said transmitter station data that represents a record of said selected media or said control signal.</u></p>	<p>44. A television receiver system comprising: a television receiver for receiving a selected broadcast or cablecast television transmission and transferring television programming in said transmission to a television display; an input device for inputting information of the reaction of a viewer to specific television program content; a digital detector operatively connected to a mass medium receiver for detecting digital information in a mass medium transmission and transferring some of said detected information to a processor; and a processor operatively connected to said detector and said input device for generating and outputting information of a video overlay that is related to said television programming or said reaction information; and a television display device operatively connected to said processor for receiving and displaying said video overlay.</p>

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Application Claim 46	U.S. Pat. No. 4,704,725, Claim 3
<p>46. A method of delivering informative materials by communicating said informative materials on a communication network having a transmitter station and a receiver station, said receiver station having a user input device, a processor and a storage device, said method comprising the steps of:</p> <p><u>receiving an input from a user at said user input device;</u> <u>processing said input from said step of receiving an input at said receiver station to enable said receiver station to receive said informative materials;</u> <u>receiving said informative materials from said communication network in response to reception of said informative material enabled in said step of processing;</u> <u>and</u> <u>displaying said informative material from said step of receiving informative materials at said receiver station.</u></p>	<p>3. A method of communicating data to a multiplicity of receiver stations each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of:</p> <p>transmitting an instruct-to-transmit signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device, detecting the presence of said instruct-to-transmit signal at selected receiver stations and coupling said instruct-to-transmit signal to the computers associated with said selected stations, and causing said last named computers to generate and transmit their user specific signals to their associated output devices in response to said instruct-to-transmit signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.</p>
Application Claim 50	U.S. Pat. No. 4,694,490, Claim 1
<p>50. A method for delivery of informative materials in a communications network having a transmitter station and a plurality of receiver stations, each said of receiver stations having a display, a processor and a storage device, said method comprising the steps of:</p> <p><u>receiving at each of said plurality of receiver stations from said communication network a television program;</u> <u>receiving at each of said plurality of receiver stations from said communication network said informative materials;</u> <u>decoding said informative materials at each of said plurality of receiver stations;</u> <u>storing said informative materials from said step of decoding at said storage device of each of said receiver stations;</u> <u>recording use of said informative materials at each of said plurality of receiver stations; and</u> <u>reporting the record of use of said informative materials</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers, transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed, receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations, detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and</p>

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<u>from said step of recording from each of said plurality of receiver stations to said transmitter station.</u>	causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.
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Application Claim 54	U.S. Pat. No. 4,965,825, Claim 14
<p>54. A method of controlling a remote transmitter station to communicate program material to a remote receiver station and controlling said remote receiver station to communicate a response generated at said remote receiver station to a remote data collection station, said method of controlling comprising the steps of:</p> <p>(1) <u>receiving a unit of programming to be transmitted at a remote transmitter station, and said transmitter station transferring said unit of programming to a transmitter;</u></p> <p>(2) <u>receiving one or more instruct signals and a code or datum at said remote transmitter station, said one or more instruct signals operate at the remote receiver station to control a receiver station apparatus and direct said receiver station to communicate said code or datum to a remote data collection site, said transmitter station transferring said one or more instruct signal to said transmitter;</u></p> <p>(3) <u>receiving one or more control signals at said remote transmitter station, said control signals control the communication of said unit of programming and said one or more instruct signals between said remote intermediate transmitter station and said remote receiver station; and</u></p> <p>(4) <u>transmitting from said remote transmitter station an information transmission comprising said first unit of programming, said one or more instruct signals and said code or datum in response to said one or more control signals at said remote intermediate transmitter station.</u></p>	<p>14. A method of processing signals including:</p> <p>(a) the step of receiving a carrier transmission;</p> <p>(b) the step of demodulating said carrier transmission to detect an information transmission thereon;</p> <p>(c) the step of detecting and identifying embedded signals on said information transmission;</p> <p>(d) the step of passing said embedded signals to a device or devices to be controlled based on instructions identified within said embedded signals;</p> <p>(e) the step of controlling said devices based on the instructions within said embedded signals; and</p> <p>(f) the step of recording the receipt of and passing to said devices of said embedded signals.</p>

Application Claim 58	U.S. Pat. No. 5,109,414, Claim 1
<p>58. <u>A method of controlling a remote intermediate mass medium programming transmitter station to communicate mass medium program material to one or more receiver stations, with said remote transmitter station including a broadcast or cablecast transmitter for transmitting one or more units of mass medium programming, a plurality of selective transfer devices each operatively connected to said broadcast or cablecast transmitter for communicating a unit of mass medium programming, a mass medium programming receiver, a control signal detector, and a controller or computer capable of controlling one or more of said selective transfer devices, and with said remote transmitter station</u></p>	<p>1. In a signal processing system, a plurality of receiver/distribution means for receiving programming from a program source and for inputting said programming to a switch means and a plurality of detector means, a switch means for receiving output from said plurality of receiver/distribution means, said switch means being capable of directing a selected portion of said programming received from one or more said receiver/distribution means to an associated output device,</p> <p>a plurality of detector means for detecting control signals respecting said programming,</p> <p>a first processor means operatively connected to said</p>

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<p><u>adapted to detect the presence of one or more control signals, to control the communication of specific units of mass medium programming in response to detected specific control signals, and to deliver at its broadcast or cablecast transmitter one or more units of mass medium programming, said method of communicating comprising the steps of:</u></p> <p><u>receiving a unit of mass medium programming to be transmitted by the remote intermediate mass medium programming transmitter station and delivering said unit of mass medium programming to a transmitter, said unit of mass medium programming having an instruct signal which is effective to control a receiver station apparatus and a code or datum to serve as evidence of the passing of said instruct signal to a controllable device or of the functioning of said controllable apparatus in response to said instruct signal;</u></p> <p><u>receiving one or more control signals which at the remote intermediate mass medium programming transmitter station operate to control the communication of said unit of mass medium programming; and</u></p> <p><u>transmitting said one or more control signals to said transmitter before a specific time.</u></p>	<p>plurality of detector means for identifying each detected control signal as having been detected by a particular detector means,</p> <p>a storage means for receiving and storing said detected control signals, and</p> <p>a second processor means for controlling the output directing function of said switch means.</p>
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Application Claim 61	U.S. Pat. No. 4,694,490, Claim 1
<p>61. A method of processing signals at a receiver station having a computer and a output device to deliver at the output device a combined or sequential presentation of a program and a user specific output, with said computer having a storage device for storing user data and said output outputting mass medium programming and other information, said method comprising the steps of:</p> <p><u>storing user data of interest;</u></p> <p><u>receiving from a mass medium programming source an information transmission containing mass medium programming;</u></p> <p><u>transferring said mass medium programming to said output device and outputting said mass medium programming;</u></p> <p><u>detecting in said information transmission an instruct signal which is effective to control a receiver station apparatus and a code or datum to serve as evidence of the passing of said instruct signal to a controllable device or of the functioning of said controllable apparatus in response to said instruct signal; and</u></p> <p><u>controlling said computer based on said detected instruct signal, said step of controlling comprising:</u></p> <p><u>(1) selecting a specific portion of said stored user data of interest;</u></p> <p><u>(2) communicating said selected specific portion of</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,</p> <p>transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,</p> <p>receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,</p> <p>detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television</p>

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<p><u>said stored user data of interest to said output device; and subsequently</u> <u>(3) ceasing to communicate said specific portion to said output device;</u> <u>(4) delivering at said output device the combined or sequential output of said received mass medium programming and said selected specific portion of said stored user data of interest.</u></p>	<p>program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.</p>
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Application Claim 63	U.S. Pat. No. 4,704,725, Claim 3
<p>63. A method for tracking a reception of a control signal and a function of said control signal at a receiver station in a data network, said receiver station having a processor, a storage device, and a plurality of peripheral device interface connections, said method comprising the steps of:</p> <p><u>receiving said control signal at said receiver station;</u> <u>detecting said control signal at said receiver station;</u> <u>passing said control signal from said processor to at least one peripheral device through one of said plurality of peripheral device interface connections;</u> <u>establishing what function said control signal from said step of passing said control signal performed at said at least one peripheral device; and</u> <u>storing on said storage device the function of said control signal from said step of establishing what function said control signal performed at said at least one peripheral device.</u></p>	<p>3. A method of communicating data to a multiplicity of receiver stations each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of:</p> <p>transmitting an instruct-to-transmit signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device,</p> <p>detecting the presence of said instruct-to-transmit signal at selected receiver stations and coupling said instruct-to-transmit signal to the computers associated with said selected stations, and</p> <p>causing said last named computers to generate and transmit their user specific signals to their associated output devices in response to said instruct-to-transmit signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.</p>

Application Claim 73	U.S. Pat. No. 4,694,490, Claim 1
<p>73. A method of processing signals at a receiver station having a computer and an output device to deliver at the output device a combined programming presentation including a coordinated output, said computer having a storage device for storing user data and said output device outputting at least mass medium programming, said method comprising the steps of:</p> <p><u>storing user data;</u> <u>receiving mass medium programming from a programming source and outputting said mass medium programming at said output device;</u> <u>receiving one of a broadcast information transmission</u></p>	<p>1. A method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay signals to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, comprising the steps of:</p> <p>transmitting a video signal containing a television program signal to said receivers,</p> <p>transmitting an instruct-to-overlay signal to said receiver stations at a time when the corresponding overlay is not being displayed,</p>

Instant Independent Claims Patentable Subject Matter over Applicants' Patented Claims

and a cablecast information transmission including an instruct signal which is effective to control receiver station apparatus and at least one of a code and a datum to serve as evidence of one of:

(1) a passing of said instruct signal to controllable apparatus and;

(2) a functioning of said controllable apparatus in response to said instruct signal;

detecting said instruct signal in said one of said broadcast information transmission and said cablecast information transmission and passing said detected instruct signal to said computer; and
controlling said computer based on said detected instruct signal, said step of controlling including:

(1) selecting a specific portion of data;

(2) communicating said selected specific portion of data to said storage device; and subsequently
(3) ceasing to communicate an image from said storage device, said image based on said specific portion of data;

(4) delivering at said output device said combined programming presentation, said combined programming presentation comprising simultaneous output of said received mass medium programming with said image, said combined programming presentation presented in the period of time between said step of communicating step of ceasing to communicate;

detecting said at least one of a code and a datum evidencing said one of:

(1) a passing of said instruct signal to said controllable apparatus and;

(2) a functioning of said controllable apparatus in response to said instruct signal;

storing said at least one of a code and a datum.

(3) a time in which to one of output and store one of a portion of said mass medium programming and a portion of computer output.

receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations,
 detecting the presence of said instruct-to-overlay signal at said selected receiver stations and coupling said instruct-to-overlay signal to the computers associated with the video receivers of said selected stations, and causing said last named computers to generate and transmit their overlay signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a display at the selected receiver stations including the television program material and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.

Application Claim 83	U.S. Pat. No. 4,704,725, Claim 3
<p>83. A method of communicating mass medium programming to at least one receiver station each of which includes one of a broadcast programming receiver and a cablecast programming receiver, an output device, a control signal detector, a processor operably connected to said output device, and with each said receiver station adapted to detect and respond to at least one instruct signal, said method of communicating comprising the steps of:</p> <p><u>receiving the mass medium programming to be transmitted and delivering said mass medium programming to transmitter apparatus;</u> <u>receiving said at least one instruct signal at said transmitter station, said at least one instruct signal at the receiver station operating to control a receiver station apparatus and store at least one of a code and a datum to</u></p>	<p>3. A method of communicating data to a multiplicity of receiver stations each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of:</p> <p>transmitting an instruct-to-transmit signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device, detecting the presence of said instruct-to-transmit signal at selected receiver stations and coupling said instruct-to-transmit signal to the computers associated with said</p>

Instant Independent Claims Patentable Subject Matter over Applicants' Patented Claims

<p>serve as evidence of one of:</p> <p>(a) <u>a passing of said at least one instruct signal to controllable apparatus; and</u></p> <p>(b) <u>a functioning of said controllable apparatus in response to said at least one instruct signal;</u> <u>transferring said at least one instruct signal and said at least one of a code and a datum to said transmitter apparatus; and</u> <u>transmitting said mass medium programming, said at least one instruct signal, and said at least one of a code and a datum.</u></p>	<p>selected stations, and causing said last named computers to generate and transmit their user specific signals to their associated output devices in response to said instruct-to-transmit signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.</p>
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Application Claim 90	U.S. Pat. No. 4,965,825, Claim 14
<p>90. A method of controlling a remote transmitter station to deliver a receiver specific output to a receiver station and controlling said receiver station to communicate at least one receiver specific datum to a remote data collection station, with said receiver station being remote from said remote data collection station comprising the steps of:</p> <p>(1) <u>receiving at the remote transmitter station at least one instruct signal which operates at the receiver station to perform one of the functions of assembling and communicating receiver specific data to a remote data collection station;</u></p> <p>(2) <u>receiving a control signal which operates at the remote transmitter station to control the communication of at least one instruct signal, and communicating said control signal to said remote transmitter station;</u></p> <p>(3) <u>monitoring a use of at least one of said control signal and a resource which responds to said control signal;</u></p> <p>(4) <u>storing a record of the use of at least one of said control signal and a resource which responds to said control signal from said step of monitoring;</u></p> <p>(5) <u>receiving one of a code and a datum designating a specific instruct signal to be transmitted by the remote transmitter station, and said remote transmitter station transferring said designated specific instruct signal to a transmitter; and</u></p> <p>(6) <u>transmitting from said remote transmitter station an information transmission comprising at least one designated instruct signal, said at least one designated instruct signal being transmitted at at least one specific time and on at least one specific channel in accordance with said control signal.</u></p>	<p>14. A method of processing signals including:</p> <p>(a) the step of receiving a carrier transmission;</p> <p>(b) the step of demodulating said carrier transmission to detect an information transmission thereon;</p> <p>(c) the step of detecting and identifying embedded signals on said information transmission;</p> <p>(d) the step of passing said embedded signals to a device or devices to be controlled based on instructions identified within said embedded signals;</p> <p>(e) the step of controlling said devices based on the instructions within said embedded signals; and</p> <p>(f) the step of recording the receipt of and passing to said devices of said embedded signals.</p>

Application Claim 93	U.S. Pat. No. 4,704,725, Claim 3
<p>93. A method for promoting and delivering at least one of a product, service, and a media output for use with an interactive television viewing apparatus comprising the steps of:</p>	<p>3. A method of communicating data to a multiplicity of receiver stations each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their associated output devices, each of said computers being programmed to</p>

<p><u>displaying a television program that promotes at least one of a product, a service, and a media output, said interactive television viewing apparatus having an input device to receive input from a viewer;</u> <u>prompting said viewer during said television program whether said viewer wants said at least one of a product, a service, and a media output prompted in said step of displaying, said interactive television viewing apparatus having an output device for outputting at least one of said product, said service, and said media output;</u> <u>receiving a reply from said viewer at said input device in response to said step of prompting said viewer, said interactive television viewing apparatus having a processor for processing said viewer reply to perform at least one of the functions of obtaining and enabling instructions which perform at least one of the functions of providing and controlling output of said at least one of a product, a service, and a media output in response to said instructions;</u> <u>delivering said instructions at said interactive television viewing apparatus in response to said step of receiving a reply, said instructions controlling said interactive television viewing apparatus in performing a technique for delivering said at least one of a product, a service, and a media output;</u> <u>processing said instructions from said step of delivering; performing said technique at said interactive television viewing apparatus, said processor delivering said at least one of a product, a service, and a media output on the basis of said instructions;</u> <u>monitoring use of at least one of said instructions and a resource which outputs at least a portion of said at least one of a product, a service, and a media output; and storing a record of said use of said at least one of said instructions and said resource from said step of monitoring.</u></p>	<p>accommodate a special user application, comprising the steps of: transmitting an instruct-to-transmit signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device, detecting the presence of said instruct-to-transmit signal at selected receiver stations and coupling said instruct-to-transmit signal to the computers associated with said selected stations, and causing said last named computers to generate and transmit their user specific signals to their associated output devices in response to said instruct-to-transmit signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.</p>
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Application Claim 122	U.S. Pat. No. 4,965,825, Claim 14
<p>122. A method of gathering information on the use of at least one of a resource and a control signal at a receiver station, said receiver station having a processor and a controlled device, said receiver station transferring said gathered information to a remote station, said method comprising the steps of: (1) <u>identifying at least one of a resource and a control signal;</u> (2) <u>monitoring at least one of said resource and said control signal;</u> (3) <u>storing a record of the use of at least one of said resource and said control signal from said step of monitoring; and</u> (4) <u>communicating information evidencing said use of at least one of said resource and said control signal from said step of storing a record from said</u></p>	<p>14. A method of processing signals including: (a) the step of receiving a carrier transmission; (b) the step of demodulating said carrier transmission to detect an information transmission thereon; (c) the step of detecting and identifying embedded signals on said information transmission; (d) the step of passing said embedded signals to a device or devices to be controlled based on instructions identified within said embedded signals; (e) the step of controlling said devices based on the instructions within said embedded signals; and</p>

Instant Independent Claims Patentable Subject Matter over Applicants' Patented Claims

receiver station to a remote station.

(f) the step of recording the receipt of and passing to said devices of said embedded signals.

APPENDIX C

**CORRELATION CHARTS
BETWEEN
THE PARENT 1981 SPECIFICATION
(as referenced to column and line numbers of U.S. Pat. No. 4,694,490)
AND
THE INSTANT 1987 PRIORITY SPECIFICATION**

Specification Correlation Chart

I. COLUMN 1

Column 1 lines 1-22.	<p>SIGNAL PROCESSING APPARATUS AND METHODS</p> <p>BACKGROUND OF THE INVENTION</p> <p>At the present time, vast amounts of programing are transmitted through various media throughout the United States which programing is handled with significant degrees of manual processing as different, discrete units of programing transmitted on single channel systems. Broadcasters and cablecasters transmit programing with the expectation that viewers in one place tune to only onechannel at a time.</p> <p>On occasion and on a limited scale, the co-ordination of two media and two channels has occurred. Such co ordination has taken the form of stereo simulcasts where one local television station broadcasts a program, generally of classical music, and simultaneously, a local radio station broadcasts the same music in stereo. But such simulcasts require significant degrees of manual processing at both the points of origination and reception.</p>	Page 7 lines 7-12.	[The prior art] has no capacity for coordinating the programming content transmitted by any given peripheral system with any other programming transmitted to a television receiver. It has no capacity for controlling two separate systems such as, for example, an automatic radio and television stereo simulcast.
Column 1 lines 23-28.	Today great potential exists for a significant increase in the scope and scale of multimedia and multichannel presentations. This increase is desirable because it will increase variety and add substantially to the richness of presentations as regards both entertainment and the communications of ideas and information.	Page 2 lines 20-23.	Unlocking this potential is desirable because these new media will add substantial richness and variety to the communication of ideas, information and entertainment.
Column 1 lines 29-35.	This potential arises out of two simultaneous, independent trends. One is the development and growth of the so-called cable television industry whose member companies deliver locally not one but many channels of programing. The other is the widespread and growing ownership of computers, especially microcomputers in homes.	Page 2 lines 8-11.	Today great potential exists for combining the capacity of broadcast communications media to convey ideas with the capacity of computers to process and output user specific information.
Column 1 lines 36-41.	It is the object of this invention to unlock this potential by the development of means and methods which permit programing to communicate with equipment that is external to television and radio receivers, particularly computers and computer peripherals such as printers.	Page 3 lines 30-33, Page 2 line 25 to page 3 line 8.	<p>It is the object of this invention to unlock this great potential in the fullest measure by means of an integrated system of programming communication that joins together all these capacities most efficiently.</p> <p>To unlock this potential fully requires means and methods for combining and controlling receiver systems that are now separate--television and computers, radio and computers, broadcast print and computers, television and computers and</p>

Specification Correlation Chart

			<p>broadcast print, etc.</p> <p>But it requires much more.</p> <p>To unlock this potential fully requires a system with efficient capacity for satisfying the demands of subscribers who have little receiver apparatus and simple information demands as well as subscribers who have extensive apparatus and complex demands. It requires capacity for transmitting and organizing vastly more information and programming than any one-channel transmission system can possibly convey at one time. It requires capacity for controlling intermediate transmission stations that receive information and programming from many sources and for organizing the information and programming so as to make the use of the information and programming as possible.</p>
Column 1 lines 42-44	<p>It is the further purpose of this invention to provide means and methods to process and monitor such transmissions and presentations at individual receiver sites...</p>	Page 3 lines 9-29.	<p>To unlock this potential also requires efficient capacity for providing reliable audit information to (1) advertisers and others who pay for the transmission and performance of programming and (2) copyright holders, pay service operators, and others such as talent who demand, instead, to be paid. This requires capacity for identifying and recording (1) what television, radio, data, and other programming and what instruction signals are transmitted at each transmission station and (2) what is received at each receiver station as well as (3) what received programming is combined or otherwise used at each receiver station and (4) how it is received, combined, and/or otherwise used.</p> <p>Moreover, this system must have the capacity to ensure that programming supplied for pay or for other conditional use is used only in accordance with those conditions. For example, subscriber station apparatus must display the commercials that are transmitted in transmissions that advertisers pay for. The system must have capacity for decrypting, in many varying ways, programming and instruction signals that are encrypted and for identifying those who pirate programming and inhibiting piracy.</p>
Column 1 lines 45-49.	<p>...and to control, in certain ways, the use of transmitted programming and the operation of certain associated equipment. Such receiver sites may be stations or systems that intend to retransmit the programming, or they may be end users of the programming.</p>	Page 11 lines 23-27.	<p>It is the further purpose of this invention to provide means and methods whereby a simplex point-to-multipoint transmission (such as a television or radio broadcast) can cause simultaneous generation of user specific information at a plurality of subscriber stations.</p>

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
Specification Correlation Chart			
Column 1 lines 49-53.	The present invention contemplates that certain data may be encrypted and that certain data collected from such processing and monitoring will automatically be transferred to a remote geographic location or locations.	Page 13 lines 5-9.	In the present invention, certain monitored signals may be encrypted, and certain data collected from such monitoring may be automatically transferred from subscriber stations to one or more remote geographic stations.
Column 1 lines 54-57.	In the prior art, there have been attempts to develop systems to control programming and systems to monitor programming, but the two have been treated as separate systems, and each has had limited capacity.	Page 2 lines 25-30.	To unlock this potential fully requires means and methods for combining and controlling receiver systems that are now separate--television and computers, radio and computers, broadcast print and computers, television and computers and broadcast print, etc.
Column 1 line 58 to column 2 line 27.	As regards control systems, cueing systems and equipment now exist that transmit instructions to operating equipment at receiver sites by means of tone signals that are carried, in television transmissions, in the audio portion and may be heard by the human ear. Such systems and devices are used to turn on equipment such as videotape players and recorders that have been manually loaded and to tell such equipment how long to run. Such systems operate by transmitting operating signals that precede and follow programming and are called "headers" and "trailers" respectively. The use of headers and trailers limits prior art in that headers and trailers can become separated from programming, thereby hampering automatic operations. Such prior art techniques have lacked the capacity to process the programming in various ways including to instruct receiver end equipment what specific programming to select to play or record other than that immediately at hand, how to load it on player or recorder equipment, when and how to play it or record it other than immediately, how to modify it, what equipment or channel or channels to transmit it on, when to transmit it, and how and where to file it or refile it or dispose of it. (Within television studios that are original transmitters of programming, certain systems and equipment do exist for certain automatic co-ordination of players, loaders, and other equipment; however, manual instructions still must be given, on site, for the co-ordination of such equipment which instructions are transmitted electronically on hard-wire channels that are strictly separate from the channels on which the programming is transmitted and such instructions are never broadcast.) Such prior art systems and equipment have lacked the capacity to automatically coordinate multi-channel and multi-media presentations. They have lacked the capacity to decrypt encrypted	Generally, page 4 line 17 to page 7 line 22.	This prior art is limited. It only transmits data; it does not control data processing. No system is preprogrammed to simultaneously control a plurality of central processor units, operating systems, and pluralities of computer peripheral units. None has capacity to cause simultaneous generation of user specific information at a plurality of receiver stations. None has any capacity to cause subscriber station computers to process received data, let alone in ways that are not inputted by the subscribers. None has any capacity to explain automatically why any given information might be of particular interest to any subscriber or why any subscriber might wish to select information that is not selected or how any subscriber might wish to change the way selected information is processed. ... This prior art, too, is limited. It has no capacity to overlay any information other than information transmitted to all receiver stations simultaneously. It has no capacity to overlay any such information except in the order in which it is received. It has no capacity to cause receiver station computers to generate any information whatsoever, let alone user specific information. It has no capacity to cause overlays to commence or cease appearing at receiver stations, let alone commence and cease appearing periodically. As regards the automation of intermediate transmission stations, various so-called "cueing" systems in the prior art operate in conjunction with network broadcast transmissions to automate the so-called "cut-in" at local television and radio stations of locally originated programming such as so-called "local spot" advertisements. ... This prior art, too, is limited. It has no capacity to schedule

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
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Specification Correlation Chart

	processing signals. They have lacked the capacity to monitor whether receiver-end equipment are following instructions properly.		<p>automatically or transmit any programming other than that loaded immediately at the play heads of the controlled video players. It has no capacity to load the video players or identify what programming is loaded on the players or verify that scheduled programs are played correctly. It has no capacity to cause the video players to record programming from any source. It has no capacity to receive programming transmissions or process received transmissions in any way. It has no capacity to operate under the control of instructions transmitted by broadcasters. It has no capacity to insert signals that convey information to or control, in any way, the automatic operation of ultimate receiver station apparatus other than television receivers.</p> <p>...</p> <p>This prior art, too, is limited. It has no capacity for interconnecting or operating a system at any time other than the time when the order to do so is entered manually at the system or remote keyboard. It has no capacity for acting on instructions transmitted by broadcasters to interconnect, actuate or tune systems peripheral to a television receiver or to actuate a television receiver or automatically change channels received by a receiver. It has no capacity for coordinating the programming content transmitted by any given peripheral system with any other programming transmitted to a television receiver. It has no capacity for controlling two separate systems such as, for example, an automatic radio and television stereo simulcast. It has no capacity for selectively connecting radio receivers to radio peripherals such as computers or printers or speakers or for connecting computers to computer peripherals (except perhaps a television set). It has no capacity for controlling the operation of decryptors or selectively inputting transmissions to decryptors or outputting transmissions from decryptors to other apparatus. It has no capacity for monitoring and maintaining records regarding what programming is selected or played on any apparatus or what apparatus is connected or how connected apparatus operate.</p>
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II. COLUMN 2

Column 2 lines 28-62.	As regards monitoring systems, various systems and devices have been developed to determine what programming	Generally page 7 line 23 to page 9 line 5.	The prior art includes a variety of systems for monitoring programming and generating so-called "ratings." One system
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Specification Correlation Chart

	<p>is played on television. One such system for monitoring programs is described in U.S. Patent to Haselwood, et al. No. 4,025,851. Another that monitors by means of audio codes that are only "substantially inaudible" is described in U.S. Patent to Crosby No. 3,845,391. Recently devices, called addressable converters, have been developed that facilitate so-called pay-per-view marketing of programming by monitoring what individual television receivers tune to and either permitting or preventing the tuners to tune to given frequencies satisfactorily. Such prior art techniques and equipment have been limited to monitoring single broadcast stations, channels or units and have lacked the ability to monitor multimedia presentations. They have been able to monitor only the audio or the video portion of television transmissions. They have been able either to monitor what is transmitted over one channel or what is received by one or more receivers but not both. They have lacked the capacity to record and transfer information simultaneously. They have been unable to decrypt encrypted signals. They have been able to monitor only single signal word types or word lengths that are placed, within the transmissions, in locations that are unvarying and unvariable. They have lacked the capacity to compare, assemble, and/or evaluate multi-word, multi-location signals. Except in the possible case of addressable converters, they have been unable to distinguish the absence of signals or signal words in transmissions. They have lacked the capacity to communicate processing instructions to external equipment as described in the paragraph above. It is the object of the present invention to overcome these and other deficiencies of the prior art.</p>		<p>that monitors by means of embedded digital signals is described in U.S. Patent to Haselwood, et al. No. 4,025,851. Another that monitors by means of audio codes that are only "substantially inaudible" is described in U.S. Patent to Crosby No. 3,845,391. A third that automatically monitors a plurality of channels by switching sequentially among them and that includes capacity to monitor audio and visual quality is described in U.S. Patent to Greenberg No. 4,547,804.</p> <p>This prior art, too, is limited. It has capacity to monitor only single broadcast stations, channels or units and lacks capacity to monitor more than one channel at a time or to monitor the combining of media. At any given monitor station, it has had capacity to monitor either what is transmitted over one or more channels or what is received on one or more receivers but not both. It has assumed monitored signals of particular format in particular transmission locations and has lacked capacity to vary formats or locations or to distinguish and act on the absence of signals or to interpret and process in any fashion signals that appear in monitored locations that are not monitored signals. It has lacked capacity to identify encrypted signals then decrypt them. It has lacked capacity to record and also transfer information to a remote geographic location simultaneously.</p> <p>As regards recorder/player systems, many means and methods exist in the prior art for recording television or audio programming and/or data on magnetic, optical or other recording media and for retransmitting prerecorded programming. Video tape recorders have capacity for automatic delayed recording of television transmissions on the basis of instructions input manually by viewers. So-called "interactive video" systems have capacity for locating prerecorded television programming on a given disc and transmitting it to television receivers and locating prerecorded digital data on the same disc and transmitting them to computers.</p> <p>This prior art, too, is limited. It has no capacity for automatically embedding signals in and/or removing embedded signals from a television transmission then recording the transmission. It has no capacity for controlling the connection or actuation or tuning of external apparatus. It has no capacity for retransmitting prerecorded</p>
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Specification Correlation Chart

			programming and controlling the decryption of said programming, let alone doing so on the basis of signals that are embedded in said programming that contain keys for the decryption of said programming. It has no capacity for operating on the basis of control signals transmitted to recorder/players at a plurality of subscriber stations, let alone operating on the basis of such signals to record user specific information at each subscriber station.
Column 2 lines 63-64.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit.	Page 14 lines 26-27.	(The term "signal unit" hereinafter means one complete signal instruction or information message unit.
Column 2 lines 65-66.	Examples of signal units are a unique code identifying a programming unit,...	Page 14 lines 27-29.	Examples of signal units are a unique code identifying a programming unit,
Column 2 lines 66-67.	...or a unique purchase order number identifying the proper use of a programming unit,...	Page 14 lines 27-30.	Examples of signal units are... a unique purchase order number identifying the proper use of a programming unit, or ...
Column 2 line 67 to column 3 line 3.	...or a general instruction identifying whether a programming unit is to be retransmitted immediately or recorded for delayed transmission.	Page 14 lines 27-32.	Examples of signal units are... a general instruction identifying whether a programming unit is to be retransmitted immediately or recorded for delayed transmission.

III. COLUMN 3

Column 3 lines 3-5.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission.	Page 14 lines 32-35.	The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission.
Column 3 lines 6-8.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.	Page 14 line 35 to page 15 line 2.	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
Column 3 lines 8-12.	Such strings may or may not have predetermined data bits to identify the beginnings and ends of words. Signal words may contain parts of signal units, whole signal units, or groups of partial or whole signal units or combinations.)	Page 15 lines 2-6.	Such strings may or may not have predetermined data bits to identify the beginnings and ends of words. Signal words may contain parts of signal units, whole signal units, or groups of partial or whole signal units or combinations.)
Column 3 lines 13-27.	It is a further object of the present invention to process and monitor signals on numerous channels by sequentially scanning each channel in a predetermined manner which manner may be varied. It is also an object of the present invention to prevent unauthorized use of signals and programming by permitting signal encryption, the variation of word numbers, word lengths, word compositions, and/or word locations. It is also an object of this system to process different signal words in different ways. It is also an object of	Page 3 lines 21-21\9.	Moreover, this system must have the capacity to ensure that programming supplied for pay or for other conditional use is used only in accordance with those conditions. For example, subscriber station apparatus must display the commercials that are transmitted in transmissions that advertisers pay for. The system must have capacity for decrypting, in many varying ways, programming and instruction signals that are encrypted and for identifying those who pirate programming and inhibiting piracy.

1981 Spec/Reference	1981 Language	1987 Spec/Reference	1987 Language	Specification Correlation Chart
	the present invention to provide a record of signals that may be transferred to a geographically distant location on command or predetermined instruction. Other objects of this invention will appear from the following descriptions and the appended claims.			
Column 3 line 29.	SUMMARY OF THE INVENTION	See generally page 11 line 4 to page 14 line 30.	SUMMARY OF THE INVENTION	
Column 3 lines 30-31.	The present invention consists of methods and apparatus with several forms.	Page 16 lines 15-27.	A central objective of the present invention is to provide flexibility in regard to installed station apparatus. At any given time, the system must have capacity for wide variation in individual station apparatus in order to provide individual subscribers the widest range of information options at the least cost in terms of installed equipment. Flexibility must exist for expanding the capacity of installed systems by means of transmitted software and for altering installed systems in a modular fashion by adding or removing components. Flexibility must exist for varying techniques that restrict programming to duly authorized subscribers in order to identify and deter pirates	
Column 3 lines 32-37.	One method provides a technique whereby a broadcast or cablecast transmission facility can duplicate the operation of a television studio automatically through the use of instruction and information signals embedded in programming either supplied from a remote source or sources or prerecorded.	Page 12 lines 18-24.	It is the further purpose of this invention to provide means and methods for the automation of intermediate transmission stations that receive and retransmit programming. The programming may be delivered by any means including over-the-air, hard-wire, and manual means. The stations may transmit programming over-the-air (hereinafter, "broadcast") or over hard-wire (hereinafter, "cablecast").	
Column 3 lines 37-39.	The programming may be delivered to the transmission facility by any means including broadcast, hard-wire, and manual means.	Page 11 lines 16-19.	... the present invention has capacity for transmitting data and control instructions in the same information stream to many different apparatus at a given subscriber station, for causing computers to generate and transmit programming, ...	
Column 3 lines 39-41.	The transmission facility may transmit a single channel or multiple channels of programming.	Page 12 lines 21-24.	The programming may be delivered by any means including over-the-air, hard-wire, and manual means. The stations may transmit programming over-the-air (hereinafter, "broadcast") or over hard-wire (hereinafter, "cablecast").	
Column 3 lines 41-45.	The method includes a monitoring technique to construct a record for each transmitted channel that duplicates the log that the Federal Communications Commission requires broadcast station operators to maintain.	Page 12 lines 25.	They may transmit single channels or multiple channels.	
		Page 12 lines 25-29.	The present invention includes capacity for automatically constructing records for each transmitted channel that duplicate the logs that the Federal Communications Commission requires broadcast station operators to maintain.	

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Column 3 lines 45-47.	The method permits the transfer of such records to a predetermined site or sites in a predetermined fashion or fashions.	Page 337 lines 19-21	And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.
Column 3 lines 48-51.	Another method has application at receiver sites such as private homes or public places like theaters, hotels, brokerage offices, etc., whether commercial establishments or not.	Page 12 lines 30-35.	It is the further purpose of this invention to provide means and methods for the automation of ultimate receiver stations, ... Such ultimate receiver stations may be private homes or offices or commercial establishments such as theaters, hotels, or brokerage offices.
Column 3 lines 51-56.	This method provides techniques whereby, automatically, single channel, single medium presentations, be they television, radio, or other electronic transmissions, may be recorded, co-ordinated in time with other programming previously transmitted and recorded, or processed in other fashions.	Page 12 lines 30-33. Page 2 lines 8-19.	It is the further purpose of this invention to provide means and methods for the automation of ultimate receiver stations, especially the automation of combined medium and multi-channel presentations. Today great potential exists for combining the capacity of broadcast communications media to convey ideas with the capacity of computers to process and output user specific information. One such combination would provide a new radio-based or broadcast print medium with the capacity for conveying general information to large audiences--e.g., "Stock prices rose today in heavy trading,"--with information of specific relevance to each particular user in the audience--e.g., "but the value of your stock portfolio went down." (Hereinafter, the new media that result from such combinations are called "combined" media.) ... methods for combining and controlling receiver systems that are now separate--television and computers, radio and computers, broadcast print and computers, television and computers and broadcast print, etc.
		Page 13 lines 10-13.	It is a further purpose of this invention to provide means and methods for recording combined media and/or multi-channel programming and for playing back prerecorded programming of such types.
Column 3 lines 56-60.	Multimedia presentations may be co-ordinated in time and/or in place as, for example, when real-time video programming is co-ordinated with presentations from a microcomputer working with data supplied earlier.	Page 12 lines 3-9.	It is the further purpose of this invention to provide means and methods whereby a simplex broadcast transmission can cause periodic combining of relevant user specific information and conventional broadcast programming simultaneously at a plurality of subscriber stations, thereby integrating the broadcast information with each user's own information.

Specification Correlation Chart

			<p>Today great potential exists for combining the capacity of broadcast communications media to convey ideas with the capacity of computers to process and output user specific information. One such combination would provide a new radio-based or broadcast print medium with the capacity for conveying general information to large audiences--e.g., "Stock prices rose today in heavy trading,"--with information of specific relevance to each particular user in the audience--e.g., "but the value of your stock portfolio went down." (Hereinafter, the new media that result from such combinations are called "combined" media.)</p>	<p>Page 2 lines 8-19.</p>	<p>This television based combined medium is but one example of many combined media.</p>
Column 3 lines 60-66.	<p>This method provides techniques whereby the timing and fashion of the playing, processing, and co-ordination of a presentation or presentations may be determined at the time and place of transmission or of presentation, either in whole or in part, either locally or remotely, or a combination of these factors.</p>		<p>Page 28 lines 2-3.</p>	<p>Page 11 lines 23-31.</p>	<p>It is the further purpose of this invention to provide means and methods whereby a simplex point-to-multipoint transmission (such as a television or radio broadcast) can cause simultaneous generation of user specific information at a plurality of subscriber stations. One advantage of the present invention is great ease of use. For example, as will be seen, a subscriber can cause his own information to be processed in highly complex ways by merely turning his television receiver on and tuning to a particular channel.</p>
			<p>Page 450 lines 27-35.</p>		<p>(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.)</p>
Column 3 line 66 to column 4 line 2.	<p>The method provides monitoring techniques to develop data on patterns of viewership and to permit the determination of specific usage at individual receiving sites for various purposes including, for example, the billing of individual customers.</p>		<p>Page 13 lines 1-9.</p>		<p>It is the further purpose of this invention to provide means and methods for identifying and recording what television, radio, data, and other programming is transmitted at each transmission station, what programming is received at each receiver station, and how programming is used. In the present invention, certain monitored signals may be encrypted, and certain data collected from such monitoring may be automatically transferred from subscriber stations to one or more remote geographic stations.</p>

Page 28 lines 29-35.

COLUMN 4

Page 13 lines 14-17.

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Column 4 lines 14-17.	The embedded signals may run and repeat continuously throughout the programming or they may run only occasionally or only once.	Page 14 lines 3-5.	In programming transmissions, given signals may run and repeat, for periods of time, continuously or at regular intervals. Or they may run only occasionally or only once.
Column 4 lines 17-18.	They may appear in various and varying locations.	Page 14 line 6.	They may appear in various and varying locations.
Column 4 lines 18-22.	In television they may appear on one line in the video portion of the transmission, or on a portion of one line, or on more than one line, and will probably lie outside the range of the television picture displayed on a normally tuned television set.	Page 14 lines 6-11.	In television they may appear on one line in the video portion of the transmission such as line 20 of the vertical interval, or on a portion of one line, or on more than one line, and they will probably lie outside the range of the television picture displayed on a normally tuned television set.
Column 4 lines 22-25.	In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear.	Page 14 lines 11-14.	In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear.
Column 4 lines 25-26.	In television audio, they are likely to lie between eight and fifteen kilohertz.	Page 14 lines 14-15.	In television audio, they are likely to lie between eight and fifteen kilohertz.
Column 4 lines 26-28.	Signals may also be transmitted on frequencies outside the ranges of television and radio.	Page 14 lines 15-17.	In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming....
		Page 463 lines 10-29.	(To minimize the risk that program instruction sets may become separated from their associated television programming, said sets are normally embedded in their associated television transmissions. But it is not an absolute requirement of the preferred embodiment that all program instruction sets be so embedded. If the volume of program instruction set information that a given programming transmission must transmit exceeds the transmission capacity of said transmission [eg., if the audience includes viewers who do not have overlay capacity and would see "snow" were set information transmitted in portions of the transmission obscured by overlays], at the proper time transmission stations can transmit said set information outside the conventional transmission [a program originating studio may transmit said set information, for example, in a satellite side lobe of the transponder transmission transmitting the conventional transmission, and a cable head end intermediate transmission station transmits it in a separate television channel or in a transmission in a multiplexed FM frequency spectrum transmission].)
Column 4 lines 28-30.	Different and differing numbers of signals may be sent in different and differing word lengths and locations.	Page 533 lines 9-17.	In the preferred embodiment...SPAM messages are composed of varying numbers and sequences of segments of highest priority, intermediate priority, and lowest priority segment information. Complex SPAM receiver apparatus

Specification Correlation Chart

			have means and are preprogrammed to process at register memory execution segment information of varying lengths of binary information.
Column 4 lines 31-33.	The present invention provides a method for obscuring the meaning of the signals to prevent unauthorized use of the signals and of their associated programming. Their meanings may be obscured through encryption so that apparatus described below are necessary to decrypt them.	Page 13 lines 14-17.	It is a further purpose of this invention to provide a variety of means and methods for restricting the use of transmitted communications to only duly authorized subscribers.
Column 4 lines 34-36.		Page 13 lines 17-19.	Such means and methods include techniques for encrypting programming and/or instructions and decrypting them at subscriber stations.
Column 4 lines 36-40.	In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.	Page 13 lines 19-24.	They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.
Column 4 lines 40-46.	Both the arrangement of signal units in signal words and the locations, timings, and lengths of signal words in individual transmissions or groups of transmissions may vary in fashions that can only be interpreted accurately by apparatus that are preprogrammed with the keys to such variations.	Page 14 lines 10-25.	... [signals] will probably lie outside the range of the television picture displayed on a normally tuned television set. In television and radio they may appear in a portion of the audio range that is not normally rendered in a form audible to the human ear. In television audio, they are likely to lie between eight and fifteen kilohertz. In broadcast print and data communications transmissions, the signals may accompany conventional print or data programming in the conventional transmission stream but will include instructions that receiver station apparatus are preprogrammed to process that instruct receiver apparatus to separate the signals from the conventional programming and process them differently. In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.
		Page 60 line 19 to page 61 line 1.	SPAM messages are composed of elements—headers, execution segments, meter-monitor segments, and information segments—whose bit lengths vary. SPAM apparatus determine the bit length of said elements in different fashions, and the particular fashion that applies to any given element relates to the priority of said element for subscriber station speed of processing. First priority segment information has the highest priority for speedy processing and is of fixed binary bit length. A SPAM header is one example of a first priority segment. An execution segment is another example. Intermediate priority segment information

Specification Correlation Chart

			has lower priority, varies in bit length, but contains internal length information. A Meter-monitor segment is one example of an intermediate priority segment. Lowest priority segment information has the lowest priority, varies in length, and contains no internal information for determining segment length. Each information segment is an example of a lowest priority segment.
		Page 91 lines 18-20.	All subscriber station apparatus are fully preprogrammed to perform automatically each step of each example. No manual step is required at any station.
Column 4 lines 47-49.	The present invention also provides a method for identifying attempts to make unauthorized use of signals and the programming associated with signals.	Page 293 lines 32-35.	At each station where a match fails to occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion--not resulting in a match causes...
Column 4 lines 49-50.	When an apparatus finds that signal words fail to appear in places...	Page 293 lines 28-33.	(Simultaneously other stations compare information of other selected information of bit locations that contain information of said enable-CCI3 instructions with information of other local bit locations that hold preprogrammed SPAM operating information. At each station where a match fails to occur--which suggests that the preprogrammed SPAM...
Column 4 line 51.	...and at times when and where they are expected,...	Page 300 lines 10-12.	In due course, but still before said 8:30 PM time, said program originating studio embeds in the video portion and transmits particular SPAM check information....
		Page 301 lines 4-10.	(Simultaneously other stations compare selected information of said check sequence to selected information of said 1st-stage-enable-WSW-program instructions. At each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly and suggests that the preprogrammed SPAM operating information of said station may have been tampered with....
Column 4 lines 51-53.	...the apparatus may automatically contact one or more remote sites...	Page 294 lines 10-13.	...causes said controller, 20, to cause the auto dialer, 24, and telephone connection, 22, to establish telephone communications with a particular predetermined remote station, in the fashion described above....
		Page 301 lines 18-21.	...said portion causes controller, 20, to cause the auto dialer, 24, and telephone connection, 22, of said station to establish telephone communications with a particular predetermined

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Column 4 lines 53-54.	...and may or may not disable the flow of programming in one or more ways.		remote station, in the fashion described above,.... ...controller, 20, of said station to cause all information of said local-cable-enabling-message (#7) to be erased from all memory of said station.... ...causes said controller, 20, to erase all preprogrammable RAM and EPROM of the signal processing apparatus at said station, thereby disabling said apparatus.) ...resulting in a match causes the controller, 20, of said station to cause all information of said 1st-WSW-program-enabling-message (#7) to be erased from all memory of said station.... ...the instructions of said portion cause said controller, 20, to erase all preprogrammable RAM and EPROM of the signal processing apparatus at said station,....
Column 4 lines 55-56.	The present invention contemplates signal processing apparatus...	Page 15 lines 7-8.	In the present invention, particular signal processing apparatus (hereinafter called the "signal processor")
Column 4 lines 56-57.	...comprising a device or devices that can selectively scan transmission channels as directed.	Page 15 lines 12-14.	The apparatus include one or more devices that can selectively scan transmission frequencies as directed....
Column 4 lines 57-59.	The channels may convey television, radio, or other transmission frequencies.	Page 15 lines 16-17.	The frequencies may convey television, radio, or other programming transmissions.
Column 4 lines 59-60.	The input transmissions may be received by means of antennas or from hard-wire connections.	Page 15 lines 17-19.	The input transmissions may be received by means of antennas or from hard-wire connections.
Column 4 lines 61-62.	The scanners/switches, working in parallel or series or combinations, transfer the transmissions...	Page 15 lines 19-21.	The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors....
Column 4 lines 62-65.	...to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information;...	Page 15 lines 21-23.	...transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information;....
Column 4 lines 65-67.	...decryptors that may convert the received information, in part or in whole, to other digital information according to preset methods or patterns;...	Page 15 lines 23-26.	...decryptors that may convert the received information, in part or in whole, to other digital information according to preset methods or patterns;....
Column 4 line 68 to column 5 line 2.	...and one or more processor/monitors and/or buffer/comparators that organize and transfer the information stream.	Page 15 lines 26-28.	...and one or more processor/monitors and/or buffer/comparators that organize and transfer the information stream.

V. COLUMN 5

Column 5 lines 2-4.	The processors and buffers can have inputs from each of the	Page 15 lines 28-30.	The processors and buffers can have inputs from each of the
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	receiver/detector lines and evaluate information continuously.		receiver/detector lines and evaluate information continuously.
Column 5 lines 4-7.	From the processors and buffers, the signals may be transferred to external equipment such as computers, videotape recorders and players, etc.	Page 15 lines 30-32.	From the processors and buffers, the signals may be transferred to external equipment such as computers, videotape recorders and players, etc.
Column 5 lines 7-11.	And/or they may be transferred to one or more internal digital recorders that receive and store in memory the recorded information and have connections to one or more remote sites for further transmission of the recorded information.	Page 15 line 32 to page 16 line 1.	And/or they may be transferred to one or more internal digital recorders that receive and store in memory the recorded information and have connections to one or more remote sites for further transmission of the recorded information.
Column 5 lines 11-14.	The apparatus has means for external communication and an automatic dialer and can contact remote sites and transfer stored information as required.	Page 16 lines 1-3.	The apparatus has means for external communication and an automatic dialer and can contact remote sites and transfer stored information....
Column 5 lines 14-16.	The apparatus has a clock for determining and recording time as required.	Page 16 lines 4-6.	The apparatus has a clock for determining and recording time as required.
Column 5 lines 16-20.	It has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions.	Page 16 lines 6-10.	It has a read only memory for recording permanent operating instructions and other information and a programmable random access memory controller ("PRAM controller") that permits revision of operating patterns and instructions.
Column 5 lines 20-22.	The PRAM controller may be connected to all internal operating units for full flexibility of operations.	Page 16 line 10-11.	The PRAM controller may be connected to all internal operating units for full flexibility of operations.
Column 5 lines 23-27.	Signal processing apparatus that are employed in specific situations that require fewer functions than those provided by the basic apparatus described above may omit one or more of the specific operating elements described above.	Page 16 lines 12-15.	Signal processing apparatus that are employed in specific situations that require fewer functions than those provided by the signal processor described above may omit one or more of the specific operating elements described above.
Column 5 line 29.	BRIEF DESCRIPTION OF THE DRAWINGS	See generally page 16 line 33 to page 19 line 1.	BRIEF DESCRIPTION OF THE DRAWINGS
Column 5 lines 30-31.	Fig. 1 is a block diagram of one embodiment of signal processing apparatus.	Page 17 lines 9-10.	Fig. 2 is a block diagram of one embodiment of a signal processor.
Column 5 lines 32-33.	Fig. 2A is a block diagram of a TV signal decoder apparatus.	Page 17 lines 11-12.	Fig. 2A is a block diagram of a TV signal decoder apparatus.
Column 5 lines 34-35.	Fig. 2B is a block diagram of a radio signal decoder apparatus.	Page 17 lines 13-14.	Fig. 2B is a block diagram of a radio signal decoder apparatus.
Column 5 lines 36-37.	Fig. 2C is a block diagram of an other signal decoder apparatus.	Page 17 lines 15-16.	Fig. 2C is a block diagram of an other signal decoder apparatus.
Column 5 lines 38-41.	Figs. 3A 3B and 3C are a block diagram of signal processing apparatus and methods as they might be used in an intermediate transmission facility, in this case a cable system head end.	Page 18 lines 13-15.	Fig. 6 is a block diagram of one example of signal processing apparatus and methods at an intermediate transmission station, in this case a cable system headend.

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Column 5 lines 42-57.	Fig. 4A is a block diagram of a signal processor and a programming decryptor or other interrupt means with signals input to the signal processor before programming decryption. Also included is a local input. Fig. 4B is a block diagram of a signal processor and a decryptor/interruptor with signals input to the signal processor in programming after programming decryption. Fig. 4C is a block diagram of a signal processor and a decryptor/interruptor with signals input both before and after programming decryption. Fig. 4D is a block diagram of a signal processor and a multiple decryptor/interrupters in series, with signals input both before and after programming decryption. Fig. 4E is a block diagram of a signal processor and multiple decryptor/interrupters and with signals from one channel needed for decryption of a second channel.	Page 18 lines 8-9.	Fig. 4 is a block diagram of one example of a signal processing programming reception and use regulating system.
Column 5 lines 58-60.	Fig. 5 is a block diagram of signal processor apparatus monitoring various programming and viewership patterns.	Page 18 lines 10-12.	Fig. 5 is a block diagram of one example of a signal processing apparatus and methods monitoring system installed to monitor a subscriber station.
Column 5 lines 61-64.	Fig. 6A is a block diagram of signal processor apparatus and methods used to instruct and inform external equipment governing the environment of the local receiver site.	Page 18 lines 18-20.	Fig. 7A is a block diagram of signal processing apparatus and methods with external equipment regulating the environment of the local receiver site.
Column 5 lines 65-68.	Fig. 6B is a block diagram of signal processor apparatus and methods used to co-ordinate a multi-media, multi-channel presentation and monitor such viewership.	Page 18 lines 21-23.	Fig. 7B is a block diagram of signal processing apparatus and methods used to control a combined medium, multi-channel presentation and to monitor such viewership.

VI. COLUMN 6

Column 5 lines 2-4.	The processors and buffers can have inputs from each of the receiver/detector lines and evaluate information continuously.	Page 15 lines 28-30.	The processors and buffers can have inputs from each of the receiver/detector lines and evaluate information continuously.
Column 5 lines 4-7.	From the processors and buffers, the signals may be transferred to external equipment such as computers, videotape recorders and players, etc.	Page 15 lines 30-32.	From the processors and buffers, the signals may be transferred to external equipment such as computers, videotape recorders and players, etc.
Column 5 lines 7-11.	And/or they may be transferred to one or more internal digital recorders that receive and store in memory the recorded information and have connections to one or more remote sites for further transmission of the recorded information.	Page 15 line 32 to page 16 line 1.	And/or they may be transferred to one or more internal digital recorders that receive and store in memory the recorded information and have connections to one or more remote sites for further transmission of the recorded information.
Column 5 lines 11-14.	The apparatus has means for external communication and an automatic dialer and can contact remote sites and	Page 16 lines 1-3.	The apparatus has means for external communication and an automatic dialer and can contact remote sites and transfer

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	both before and after programming decryption. Fig. 4E is a block diagram of a signal processor and multiple decryptor/interruptors and with signals from one channel needed for decryption of a second channel. Fig. 5 is a block diagram of signal processor apparatus monitoring various programming and viewership patterns.		
Column 5 lines 58-60.		Page 18 lines 10-12.	Fig. 5 is a block diagram of one example of a signal processing apparatus and methods monitoring system installed to monitor a subscriber station.
Column 5 lines 61-64.	Fig. 6A is a block diagram of signal processor apparatus and methods used to instruct and inform external equipment governing the environment of the local receiver site.	Page 18 lines 18-20.	Fig. 7A is a block diagram of signal processing apparatus and methods with external equipment regulating the environment of the local receiver site.
Column 5 lines 65-68.	Fig. 6B is a block diagram of signal processor apparatus and methods used to co-ordinate a multi-media, multi-channel presentation and monitor such viewership.	Page 18 lines 21-23.	Fig. 7B is a block diagram of signal processing apparatus and methods used to control a combined medium, multi-channel presentation and to monitor such viewership.

VII. COLUMN 7

Column 7 lines 1-5.	Detectors, 34, 37, and 38, line receiver, 33, and high pass filter, 36, all operate in predetermined fashions which fashions may be changed by external controller, 20 (referring to Fig. 1), to be described below.	Page 35 lines 31-35.	Line receiver, 33; high pass filter, 36; detectors, 34, 37, and 38; and controller, 39, all operate under control of controller, 39, and in preprogrammed fashions that may be changed by controller, 39.
Column 7 lines 6-11.	If one returns to FIG. 1, one sees that the three separate lines of information outputted from TV signal decoder, 30, are then gated to a buffer/comparator, 8, which also receives other inputs from the other separate receivers comprising similar filters, demodulators, and decoders for other channels of interest.	Page 33 lines 18-21.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor and can receive operating information from said elements.
Column 7 lines 12-15.	One such other path is that from mixer 2. Mixer 2 and the controlled oscillator, 6, act to select a radio frequency of interest which is inputted to a radio signal decoder, 40...	Page 29 line 33 to page 30 line 5.	Decoder, 30, which is shown in detail in Fig. 2A, and decoder, 40, which is shown in Fig. 2B, detect signal information embedded in the respective inputted television and radio frequencies, ... and output said signals and said modified signals to buffer/comparator, 8.
Column 7 lines 15-18.	...shown in FIG. 2B. The frequency passes first through standard radio receiver circuitry, 41, well known in the art, a radio decoder, 42, and a standard digital detector, 43.	Page 29 lines 26-29.	Simultaneously, mixer, 2, and the controlled oscillator, 6, act to select a radio frequency of interest which is inputted to a radio signal decoder, 40.
		Page 36 lines 1-14.	Fig. 2B shows a radio signal decoder that detects and processes signal information embedded in an inputted radio frequency. Decoder, 40, in Fig. 2 is one such radio signal decoder. A selected frequency of interest is inputted at a fixed frequency to standard radio receiver circuitry, 41, which receives the radio information of said frequency using standard radio receiver techniques, well known in the art, and transfers said radio information to radio decoder, 42. Radio

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			decoder, 42, decodes the signal information embedded in said radio information and transfers said decoded information to a standard digital detector, 43. Said detector, 43, detects the binary signal information in said decoded information and inputs said signal information to controller, 44, discussed more fully below.
Column 7 lines 18-20.	All operate in predetermined fashions that may be changed by external controller, 20 (referring to Fig. 1).	Page 36 lines 14-17.	Circuitry, 41; decoder, 42; and detector, 43, all operate under control of controller, 44, and in predetermined fashions that may be changed by controller, 44.
Column 7 lines 20-21.	As FIG. 1 shows, the radio signal detector outputs to buffer/comparator 8.	Page 33 lines 18-21.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor and can receive operating information from said elements.
Column 7 lines 22-24.	(The signal processor apparatus described here is configured to receive broadcast TV transmissions and cablecast TV and radio transmissions.	Page 29 line 32 to page 30 line 5.	Decoder, 30, which is shown in detail in Fig. 2A, and decoder, 40, which is shown in Fig. 2B, detect signal information embedded in the respective inputted television and radio frequencies, ... and output said signals and said modified signals to buffer/comparator, 8.
Column 7 lines 24-30.	Were it desirable to process signals in other transmissions such as broadcast microwave transmissions or cablecast transmissions on other than standard TV and radio frequencies, the mixers and switches would be appropriately reconfigured and one or more other signal decoders as described in FIG. 2C would be added.	Page 29 lines 4-7.	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.
		Page 33 lines 26-33.	... a signal processor can monitor any combination of inputs and transmission frequencies, and the signal processor of Fig. 2 is but one embodiment of a signal processor. Other embodiments can receive and monitor available programming in transmission frequencies other than radio and television frequencies through the addition of one or more other signal decoders such as that of Fig. 2C described below.
Column 7 lines 30-34.	As FIG. 2C shows, the desired frequencies would pass through appropriate other receiver circuitry, 45, well known in the art, and an appropriate digital detector, 46, before being outputted to buffer/comparator 8.	Page 36 lines 18-29.	Fig. 2C shows a signal decoder that detects and processes signal information embedded in a frequency other than a television or radio frequency. A selected other frequency (such as a microwave frequency) is inputted to appropriate other receiver circuitry, 45, well known in the art. Said receiver circuitry, 45, receives the information of said frequency using standard receiver techniques, well known in the art, and transfers said information to an appropriate digital detector, 46. Said detector, 46, detects the binary signal information in said information and inputs said signal information to controller, 47, considered more fully below.
Column 7 lines 34-35.	These, too, can be controlled by controller, 20 (ref. to Fig. 1).)	Page 36 lines 29-31.	Circuitry, 45, and detector, 46, operate under control of

Specification Correlation Chart

			controller, 47, and in predetermined fashions that may be changed by controller, 47.
Column 7 lines 36-37.	Buffer/comparator, 8, organizes the data stream that it receives according to a pre-determined fashion...	Page 33 lines 18-21.	Controller, 20, has capacity for controlling the operation of all elements of the signal processor and can receive operating information from said elements.
		Page 30 lines 7-9.	Buffer/comparator, 8, receives said signals from said decoders and other signals from other inputs and organizes the received information in a predetermined fashion.
		Page 36 line 32 to page 37 line 3.	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities. Said buffer capacity of controller, 39, 44, or 47, includes capacity for ... organizing, ... inputs
Column 7 lines 37-39.	...that enables buffer/comparator, 8, among other things, to assemble signal units from signal words.	Page 37 lines 22 to page 38 line 10.	Controller, 39, 44, or 47, is preprogrammed to receive units of signal information, to assemble said units into signal words that subscriber station apparatus can receive and process, and to transfer said words to said apparatus. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus. Said controller, 39, 44, or 47, has one or more output ports for communicating signal information to said apparatus.
		Page 156 line 33.	Fig. 3A shows one such preferred controller, 39.
		Page 157 lines 5-7.	Buffer, 39C, and processor, 39D, are the second buffer and

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			processor and perform protocol conversion functions.
		Page 14 lines 22-25.	In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.
Column 7 lines 39-43.	In a pre-determined fashion, buffer/comparator, 8, identifies signal words and/or signal units that must be decrypted, either in whole or in part, and passes identified signal words and/or units to decrypter, 10.	Page 30 lines 21-26.	In a fashion described more fully below, buffer/comparator, 8, and a controller, 20, which, too, is described more fully below, determine whether signal processor, 26, is enabled to decrypt said information. If signal processor, 26, is so enabled, buffer/comparator, 8, transfers said information to decryptor, 10.
Column 7 lines 43-46.	Decrypter, 10, uses conventional decrypter techniques, well known in the art, in a pre-determined fashion to decrypt such signals as required.	Page 30 lines 31-35.	Decryptor, 10, is a standard digital information decryptor, well known in the art, that ... uses conventional decryptor techniques, well known in the art, to decrypt said signals as required.
Column 7 lines 46-47.	Decrypter, 10, then passes the decrypted signals to processor or monitor, 12.	Page 30 line 35 to page 31 line 1.	Decryptor, 10, transfers decrypted signals to controller, 12.
Column 7 lines 47-49.	Buffer/comparator, 8, passes signal words and units not identified as requiring decryption directly to processor or monitor, 12.	Page 30 lines 29-30.	Buffer/comparator, 8, transfers signals that do not require decryption directly to processor or controller, 12.
Column 7 lines 50-54.	Processor or monitor, 12, analyzes, in a pre-determined fashion, the signal words and units that it receives and determines whether they are to be passed to external equipment or to buffer/comparator, 14, for further processing or both.	Page 31 lines 10-14.	Controller, 12, receives the signals inputted from buffer/comparator, 8, and decryptor, 10; analyzes said signals in a predetermined fashion; and determines whether they are to be transferred to external equipment or to buffer/comparator, 14, or both.
Column 7 lines 54-58.	If a signal or signals are to be passed externally, processor unit, 12, identifies, in a pre-determined fashion, the external equipment to which the signal or signals are addressed and passes them to appropriate jack ports for external transmission.	Page 31 lines 14-18.	If a signal or signals are to be transferred externally, in a predetermined fashion controller, 12, identifies the external apparatus to which the signal or signals are addressed and transfers them to the appropriate port or ports for external transmission.
Column 7 lines 59-60.	If they are to be processed further, processor or monitor, 12, passes them to buffer/comparator, 14.	Page 31 lines 18-22.	If they contain meter and/or monitor information and are to be processed further, controller, 12, selects, assembles, and transfers the appropriate information to buffer/comparator, 14.
Column 7 lines 60-64.	Processor or monitor, 12, communicates with clock, 18, and has means to delay the transfer of signals, in a predetermined fashion, when delayed transfer is determined, in a predetermined fashion, to be required.	Page 31 lines 26-29.	Controller, 12, receives time information from clock, 18, and has means to delay in a predetermined fashion the transfer of signals when, in a predetermined fashion, delayed transfer is determined to be required.
Column 7 lines 65-67.	Buffer/comparator, 14, has means for identifying, according to a predetermined fashion, which signals are to be recorded.	Page 31 line 30 to page 32 line 6.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information ... organizes said received information into meter records and/or monitor

1987 Language	1987 Spec Reference	1987 Language	1987 Spec Reference
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			records (called, in aggregate, hereinafter, "signal records") ... and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... has capacity to determine, in a predetermined fashion or fashions, what received information should be recorded, ...
Column 7 line 67 to column 8 line 1.	To avoid overloading digital recorder, 16, with duplicate data, buffer/comparator, 14, has means for counting and/or discarding duplicate instances of particular signal information....	Page 32 lines 9-12.	

VIII. COLUMN 8

Column 8 lines 2-4.	Buffer/comparator, 14, is connected to clock, 18, and has means for adding information such as time of receipt, for example, to signals.	Page 32 lines 14-16.	Buffer/comparator, 14, receives time information from clock, 18, and has means for incorporating time information into signal records.
Column 8 lines 4-7.	Upon determining in a predetermined fashion that a signal word or unit should be passed, buffer/comparator, 14, transmits the combined information to a digital recorder, 16.	Page 31 line 30 to page 32 line 1.	Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, ...
Column 8 lines 7-12.	Buffer/ comparator, 14, also has means for determining, in a predetermined fashion, when signals require transfer immediately to a remote site and for communicating such a requirement to controller, 20, and such signals directly with the remote site via telephone connection, 22.	Page 32 lines 16-20.	Buffer/comparator, 14, also has means for transferring received information immediately to a remote site or sites via telephone connection, 22, and for communicating a requirement for such transfer to controller, 20, which causes such transfer.
Column 8 lines 13-14.	Digital recorder, 16, may be a memory storage element of standard design.	Page 32 lines 34-35.	Digital recorder, 16, is a memory storage element of standard design. ...
Column 8 lines 14-16.	It has means for determining in a predetermined fashion how full it is and passing this information to controller, 20.	Page 33 lines 2-4.	In a predetermined fashion, recorder, 16, can determine how full it is and transmit this information to controller, 20.
Column 8 lines 16-19.	The predetermined fashion may include provisions whereby recorder, 16, informs controller, 20, automatically when it reaches a certain level of fullness.	Page 33 lines 4-6.	Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness.
Column 8 lines 20-25.	The signal processor apparatus also has a controller device which includes programmable random access memory controller 20, read only memory 21 that may contain a unique digital code capable of identifying the signal processing apparatus uniquely, an automatic dialing device 24, and a telephone unit, 22.	Page 33 lines 7-12.	Signal processor, 26, has a controller device which includes programmable RAM controller, 20; ROM, 21, that may contain unique digital code information capable of identifying signal processor, 26, and the subscriber station of said processor, 26, uniquely; an automatic dialing device 24; and a telephone unit, 22.
Column 8 lines 25-27.	The controller, 20, governs the operation of all operating	Page 33 lines 18-20.	Controller, 20, has capacity for controlling the operation of

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1987 Spec. Reference	1987 Language	1987 Spec. Reference	1987 Language
Column 8 lines 27-29.	elements of the apparatus. The controller, 20, inputs the local oscillator, 6, a sequential pattern to select the various channels to be received by switch, 1, and mixers, 2 and 3.	all elements of the signal processor ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern.	
Column 8 lines 30-32.	This then allows the channels to be diverted to the detectors, receivers, and decoders in any predetermined pattern desired.	Page 248 line 35 to page 249 line 5. Page 248 line 35 to page 249 line 5. Page 253 lines 22-35.	In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. Automatically oscillator, 6, causes switch, 1, to shift its contact lever from the first alternate contact to the second alternate contact to which wireless transmissions are inputted and causes mixer, 3, to select the frequency of channel 5 and input said frequency of interest, at a fixed frequency, to decoder, 30. Controller, 20, then transmits a particular preprogrammed wireless-5 instruction to said control processor, 39J, that informs said processor, 39J, wireless channel 5 is inputted to decoder, 30. Receiving said wireless-5 instruction causes control processor, 39J, to cause all apparatus of decoder, 30, to commence receiving, detecting, and processing SPAM message information embedded in the inputted frequency of interest. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40. Controller, 20, then transmits a particular preprogrammed radio-99.0 instruction to control processor, 44J, that informs said processor, 44J, 99.0 MHz is inputted to decoder, 40. Receiving said radio-99.0 instruction causes control processor, 44J, to cause all apparatus of decoder, 40, to commence receiving, detecting, and processing SPAM message information embedded in the inputted frequency of interest.
Column 8 lines 32-35.	The controller, 20, can instruct signal decoders, 30 and 40, when, where, and how to look for signal words, which allows signal words to be received in any pattern or patterns.	Page 33 lines 18-20. For example, page 290 line 11 to page 291 line	Controller, 20, has capacity for controlling the operation of all elements of the signal processor executing said instructions causes controller, 20, causes prepare to receive a particular enabling SPAM

Specification Correlation Chart

	4.	<p>message at a particular time. Automatically, controller, 20, checks the time of the clock, 18, of signal processor, 200, periodically. At a particular commence-enabling time that is a predetermined interval prior to the aforementioned 8:30 PM time (when said originating studio commences transmitting the "Wall Street Week" program), controller, 20, causes all apparatus of the TV signal decoder, 30, to delete from memory all information of received SPAM information; transmits particular preprogrammed enable-next-program-on-CC13 information to the control processor, 39J, of said decoder, 30, and causes said control processor, 39J, to place one instance of said information at a particular controlled-function-invoking information location; causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; causes said control processor, 39J, to cause digital detectors, 34, 37, and 38, to cease inputting detected information to controller, 39, and commence discarding said information (which said detectors, 34, 37, and 38, have capacity to do) and to cause particular apparatus of decoder, 30,--for example, line receiver, 33, and digital detector, 34--to commence receiving and inputting to controller, 39, SPAM information detected in the frequency inputted to decoder, 30, ...</p> <p>They also include techniques whereby the pattern of the composition, timing, and location of embedded signals may vary in such fashions that only receiving apparatus that are preinformed regarding the patterns that obtain at any given time will be able to process the signals correctly.</p> <p>Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...</p> <p>Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital</p>
		<p>Page 13 lines 19-24.</p>
		<p>Page 33 lines 18-20.</p> <p>Page 37 line 31 to page 38 line 3.</p>
Column 8 lines 35-37.	[Controller, 20 can instruct buffer/ comparator, 8,] how to assemble signal words into signal units and join units together for further transfer and...	

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		information that subscriber station apparatus can receive and process; ...	
Column 8 lines 38-39.	... [Controller, 20 can instruct buffer/comparator 8] how to determine which signals to pass to decrypter, 10.	Page 39 lines 16-21.	Controller, 20, has capacity to preprogram (or reprogram) all said decoder apparatus, 27, 28, 29, 30, and 40, and thereby controls the fashions of detecting, correcting, converting, modifying, identifying, transferring, and other functioning of said decoders. Controller, 20, has capacity for controlling the operation of all elements of the signal processor ... Then said decrypt-with-J instructions cause controller, 20, to activate the output capacity of buffer/comparator, 8, that outputs to decryptor, 10; ... Controller, 20, is preprogrammed with ... Using preprogrammed information and instructions as required, said decrypt-a-00-header-message instructions transfer the received binary information of said second message from buffer/comparator, 8, to decryptor, 10, in the same fashion that the aforementioned transfer-a-00-header-message instructions controlled the transfer of the information of said message from controller, 39, to buffer/comparator, 8. Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...
Column 8 lines 39-40.	[Controller, 20] can tell decrypter, 10, when and how to change decryption patterns, fashions, and techniques.	Page 33 lines 18-20. For example, page 147 lines 29-31. For example, page 148 lines 4-16. Page 33 lines 18-20. For example, page 147 lines 23-28. For example, page 149 line 27 to page 150 line 6.	Among said preprogrammed instructions is key information of J, and said instructions cause controller, 20, automatically to select and transfer said key information to decryptor, 10. Decryptor, 10, receives said key information and automatically commences using it as its key for decryption. Decryptor, 10, commences ... decrypting ... Said decrypt-a-00-header-message instructions cause controller, 20, to cause decryptor, 10, to transfer the first H bits without decrypting or altering said bits in any fashion, to decrypt and transfer the next X bits, to transfer the next L bits without decrypting or altering said bits, to decrypt and transfer the next MMS-L bits, and finally, to transfer any bits remaining after the last of said MMS-L bits without decrypting or altering said bits. In this fashion, the cadence information in said message, which is not encrypted, is transferred by

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Column 8 lines 40-44.	[Controller, 20] can tell processor or monitor, 12, how to determine which signals to pass externally and when and where and how to determine which signals to pass to buffer/comparator, 14.	<p>Page 33 lines 18-20.</p> <p>Page 149 lines 8-15.</p> <p>For example, page 150 lines 29-35.</p> <p>For example, page 152 line 19 to page 153 line 1.</p>	<p>decryptor, 10, to controller, 12, without alteration.</p> <p>Controller, 20, has capacity for controlling the operation of all elements of the signal processor and ...</p> <p>Then said ... instructions cause controller, 20, to transmit to controller, 12, a particular transfer-decrypted-message instruction and particular decryption mark information of key J that identifies J as the decryption key.</p> <p>Receiving said instruction and information causes controller, 12, to execute particular preprogrammed transfer- and-meter instructions ...</p> <p>Automatically, controller, 12, executes preprogrammed transfer-to-205-@12 instructions; activates the output port that outputs to SPAM- controller, 205C; then commences transferring information of said decrypted information of the second message under control of said transfer-and-meter instructions commencing with the first of said H bits and transferring information, ...</p> <p>... causes controller, 12, to cease transferring information, under control of said transfer-and-meter instructions, to deactivate all output ports, and to commence executing the meter instructions of said transfer-and-meter instructions.</p> <p>Said meter instructions cause controller, 12, ... to transfer to buffer/comparator, 14, particular header identification information that identifies controller, 12, as the source of said transfer the information recorded at said SPAM-meter memory then the information recorded at said decryption-mark- @12 register memory, which information is the decryption mark of key J. (Hereinafter, said meter information generated by the second combining synch command in example #2 is called the "2nd meter information (#2).")</p> <p>Buffer/comparator, 14, operates under control of controller, 20, ...</p> <p>... buffer/comparator, 14, has means for counting and/or discarding duplicate instances of particular signal information and for incorporating count information into signal records.</p>
Column 8 lines 44-46.	[Controller, 20] can tell buffer/comparator, 14, what and how to count, what and how to mark signals, and what received signals to discard.	<p>Page 32 lines 20-21.</p> <p>Page 32 lines 10-13.</p>	

			<p>Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter & monitor information (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing information from clock, 18.</p> <p>When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion then discard all information of said record from its memory and to ...</p> <p>Controller, 20, has capacity for controlling the operation of all elements of the signal processor ...</p> <p>The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station.</p> <p>... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.</p> <p>Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number.</p> <p>Controller, 20, transfers the telephone number, 1-800-CHARGES, to auto dialer, 24, and causes the dialing of said number.</p> <p>Controller, 20, has capacity for ... all elements of the signal processor and can receive operating information from said elements.</p> <p>... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable</p>	<p>For example, page 223 lines 22-33.</p> <p>For example, page 224 lines 12-16.</p> <p>Page 33 lines 18-20.</p> <p>Page 273 lines 4-6.</p> <p>Page 273 lines 21-25.</p> <p>Page 273 lines 6-8.</p> <p>Page 274 lines 11-13.</p> <p>Page 33 lines 18-21.</p> <p>Page 290 lines 26-31.</p>	<p>Column 8 lines 46-50.</p> <p>Column 8 lines 50-55.</p> <p>Column 8 lines 56-58.</p> <p>Column 8 lines 58-60.</p>
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			control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200, and to input said selected to TV signal decoder, 30; ...
			In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ...
			A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. ... causes said controller, 20, again to cause said switch, 1, and said mixer, 3, to input the transmission of said master channel to said decoder, 30, and to cause said decoder, 30, to commence processing to detect a SPAM end of file signal.
			Said message is detected at said decoder, 30, and inputted to the controller, 39, of said decoder, 30. Receiving said message causes said controller, 39, to transmit said Read-Meters-of-Selected-Stations SPAM message to the controller, 20, of the signal processor, 200, of said station.
			Executing said ones causes controller, 20, to transmit the current reading information of utilities meter, 262, to a remote metering station computer and cause said computer to process said information. Automatically, controller, 20, ... activates telephone connection, 22; inputs a particular telephone number ...
			A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
			Said contained messages that are addressed to apparatus such as decoder, 30, PRAM controller, 20, and switch controller, 20A, that exist within the equipment case of a signal processor, 200, are inputted to said apparatus from controller, 12, via controller, 20, rather than via matrix switch, 259 ...
			(In circumstances where information collecting and processing functions are extensive--for example, when a
Column 8 lines 60-62.	An example of such a control signal is an instruction for the apparatus to contact a remote telephone unit.	Page 291 lines 21-24. Page 59 lines 29-31. Page 402 lines 22-26. Page 403 lines 7-12. Page 405 lines 20-29.	
Column 8 lines 62-65.	The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines.	Page 59 lines 29-31. For example, page 531 lines 17-22.	
Column 8 lines 65-68.	Buffer/comparator, 14, has the capacity to pass received time signals to the controller, 20, in a predetermined fashion set by	Page 32 lines 24-32.	

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	and changeable by controller, 20.		For example, page 179 lines 24-32.	given buffer/comparator, 14, must collect monitor information at a subscriber station with apparatus and/or communications flows that are extensive and complex--buffer/comparator, 14, may operate under control of a dedicated, so-called "on-board" controller, 14A, at buffer/comparator, 14, which is preprogrammed with appropriate control instructions and is controlled by controller, 20, ... Automatically, under control of said process-monitor-info instructions, onboard controller, transmits to controller, 20, a particular preprogrammed instruct-to-record instruction that causes controller, 20, to cause onboard controller, 14A, to transmit the monitor record of said prior programming to recorder, 16, in a predetermined fashion and that causes controller, 20, to cause recorder, 16, to record said monitor record information in a predetermined fashion. ... is described more fully below. Controller, 20, has capacity for controlling the operation of all elements of the signal processor and can receive operating information from said elements. Controller, 20, has capacity to turn off any program instructions, to cause the control processor, 39I, of decoder, 30, to transfer to controller, 20, selected information of said check sequence of binary information and compare said selected information to selected information of said 1st-stage-enable-WSW-program instructions ... At each station where a match fails to occur—which indicates that a decryptor, 224, is not decrypting its received information correctly and suggests that the preprogrammed SPAM operating information of said station may have been tampered with—not resulting in a match causes the controller, 20, ...
Column 8 line 68 to column 9 line 4.	Buffer/comparator, 8, and monitor or processor, 12, each have the capacity to inform controller, 20, when signals that they are instructed to look for in predetermined fashions, set by and changeable by controller, 20, fail to appear.		Page 33 lines 18-21. For example, page 300 line 32 to page 301 line 1. with respect to Page 301 lines 6-11.	

IX. COLUMN 9

Column 9 lines 4-8.	Oscillator, 6, the controller, 20, and buffer/comparator, 8, can interact in such a fashion that buffer, 8, can identify the channel that any given signal is received on and mark the	Page 258 lines 17-25.	... said wireless channel 9 and causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.
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	signal for subsequent identification of the channel.		Automatically, oscillator, 6, causes mixer, 3, to select the frequency of channel 13 and input said frequency to decoder, 30. Controller, 20, then transmits a particular preprogrammed wireless-13 instruction to said control processor, 39J, that informs said processor, 39J, wireless channel 13 is inputted to decoder, 30. ... commence transferring information from control processor, 39J, to buffer/comparator, 8, then to transmit a message that consists of binary information of a "00" header then the execution segment information of the pseudo command then a meter-monitor segment containing said monitor information in RAM (including the associated channel mark and the format information of said information) then any padding bits required to end said message. (Hereinafter, said message is called the "3rd-old-program-message (#5)") ... Receiving any given old programming message causes onboard controller, 14A, to ... determine that the channel mark ... in said old programming message matches the channel mark ... of a selected monitor information record previously initiated ... Recorder, 16, may inform controller, 20, automatically when it reaches a certain level of fullness.
Page 260 lines 5-13.			In each example, ... recorder, 16, measures the quantity of its recording capacity that holds signal records, in a predetermined fashion, and determines that said quantity is equal to or greater than said particular fullness information. Said determining causes recorder, 16, to transfer a particular instruct-to-call instruction to controller, 20, that causes controller, 20, to activate telephone connection, 22, and proceed with a particular preprogrammed telephone signal record transfer sequence that is fully automatic. The first stage of said sequence involves transferring audit information to a particular first host computer at a first remote station. Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Automatically said second computer responds with a
Page 270 lines 5-12.			
Page 33 lines 4-6.			
Page 272 line 26 to page 273 line 8.			
Column 9 lines 8-10.	Digital recorder, 16, can tell the controller, 20, when it reaches predetermined levels of fullness...		
Column 9 lines 10-12.	to permit the controller, 20, to instruct auto dialer, 24, to contact an appropriate remote site allowing the recorder, 16, to output its data		
Column 9 lines 13-16.	...making memory available. In normal operation, controller,		

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Column 9 lines 16-19.	20, may be instructed by the remote site to erase recorder, 16, which instruction controller, 20, effects through communication with recorder, 16;... ...however, controller may ignore such an instruction in a predetermined fashion, if the information in recorder, 16, is to be conveyed to more than one remote sites.	page 276 line 2.	particular transmission complete signal that causes controller, 20, to terminate said telephone call then to cause recorder, 16, to erase from memory all said meter charge information. Automatically said first computer determines, in a predetermined fashion, that the audit information has been received correctly and completely, and said determining causes said first computer automatically to transmit a particular transmission complete signal to controller, 20. Receiving said complete signal causes controller, 20, to cause telephone connection, 22, to terminate said telephone call. Then controller, 20, transfers information to recorder, 16, that causes recorder, 16, to erase from memory all said record and other information that is <i>not also meter charge information or monitor information</i> . Having completed the first stage, controller, 20, then commences automatically the second stage of said sequence which involves <i>transferring meter charge information</i> to a particular second host computer at a second remote station.
Column 9 lines 20-21.	The controller, 20, can shut off any element or elements of the apparatus in whole or in part.	Page 33 lines 21-23.	Controller, 20, has capacity to turn off any element or elements of controlled subscriber station apparatus, in whole or in part, ...
Column 9 lines 21-22.	It is interactive with external sources via telephone connection, 22,...	Page 273 lines 6-19.	Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications. Automatically, controller, 20, causes telephone connection, 22, to transfer particular identifying information that includes the unique digital identifying code of ROM, 21, to said first computer followed by a particular instruct-to-receive signal. Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20.
Column 9 line 23.	...and can be reprogrammed from such remote sources.	Page 537 lines 6-17.	At 3:10 AM, GMT, said <i>European master network station</i> transmits particular SPAM message information, embedded in the information of said master transmission, including a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain

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			<p>operating system instructions. In so doing, said European master network station inputs operating system instructions to all SPAM apparatus and receiver station computers, 73, and microcomputers, 205, thereby causing said apparatus and computers, 73 and 205, as described above in "PREPROGRAMMING RECEIVER STATION OPERATING SYSTEMS," to commence operating under control of the instructions of said operating systems.</p> <p>...particular information of said TELEPHON.EXE module that causes ... signal processor, 200, to transmit the information ... via telephone network in the fashion of example #10, to a computer at a particular remote data collection station.</p> <p>Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each farmer expects to harvest during the 2027 growing season. Automatically, the received data is aggregated, in a fashion well known in the art, at the computer of said <i>European master network</i> origination and control station ...</p> <p>Then, at 3:59 PM, on Thursday, February 18, 2027, the cycle of generating and communicating information of farmers is repeated ...</p>
Column 9 line 26.	Operation of Signal Processor Apparatus	See generally Page 86 line 31 to page 278 line 20	<p>with respect to page 555 line 24 to page 556 line 14.</p>
Column 9 lines 27-31.	The simplest forms of signal processor apparatus are each of the five paths described in Figures 2A, 2B, and 2C. Each path, by itself, is capable of identifying signals in the portions of programming transmissions that each receives.	<p>Page 34 lines 18-20.</p> <p>Page 17 lines 11-16.</p> <p>Page 15 lines 18-22.</p>	<p>Signal decoder apparatus such as decoder, 203, in Fig. 1 and decoders, 30 and 40, in Fig. 2 are basic in the unified system of this invention.</p> <p>Fig. 2A is a block diagram of a TV signal decoder apparatus.</p> <p>Fig. 2B is a block diagram of a radio signal decoder apparatus.</p> <p>Fig. 2C is a block diagram of an other signal decoder apparatus.</p> <p>... transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches,</p>

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Column 9 lines 31-33.	A digital signal is embedded by conventional generating and encoding means and transmitted in a television, radio or other transmission.		<p>Page 22 lines 1-6.</p> <p>Page 14 line 35 to page 15 line 2.</p> <p>Page 36 lines 2-3.</p> <p>Page 36 lines 19-20.</p>	<p>working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>... a first series of control instructions is generated, embedded sequentially on said line or lines of the vertical interval, and transmitted on the first and each successive frame of said television program transmission, signal unit by signal unit and word by word, until said series has been transmitted in full.</p> <p>Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>... processes signal information embedded in an inputted radio frequency.</p> <p>... processes signal information embedded in a frequency other than a television or radio frequency.</p> <p><i>See figures.</i></p> <p>The apparatus of these separate paths are designed to act on the particular frequency ranges in which embedded signal information may be found. The first path, designated A, detects signal information embedded in the video information portion of said television channel signal.</p> <p>The second path, designated B, detects signal information embedded in the audio information portion of said television channel signal.</p> <p>The third path, designated C, inputs the separately defined transmission to a digital detector, 38, which detects signal information embedded in any other information portion of said television channel signal...</p> <p>Fig. 2B shows a radio signal decoder that detects and processes signal information embedded in an inputted radio frequency.</p> <p>Fig. 2C shows a signal decoder that detects and processes signal information embedded in a frequency</p>
Column 9 lines 33-40.	Each path is capable of receiving a transmission or a portion of a transmission and detecting digital signals in that portion and transmitting said signals to in-line equipment for further processing. Each of the paths described in FIGS. 2A, 2B, and 2C can identify and process only signals embedded in the particular transmission channel inputted to said paths.		<p>Figs. 2A-2C.</p> <p>Page 35 lines 1-6.</p> <p>Page 35 lines 16-18.</p> <p>Page 35 lines 27-30.</p> <p>Page 36 lines 1-3.</p> <p>Page 36 lines 18-20.</p>	<p>The apparatus of these separate paths are designed to act on the particular frequency ranges in which embedded signal information may be found. The first path, designated A, detects signal information embedded in the video information portion of said television channel signal.</p> <p>The second path, designated B, detects signal information embedded in the audio information portion of said television channel signal.</p> <p>The third path, designated C, inputs the separately defined transmission to a digital detector, 38, which detects signal information embedded in any other information portion of said television channel signal...</p> <p>Fig. 2B shows a radio signal decoder that detects and processes signal information embedded in an inputted radio frequency.</p> <p>Fig. 2C shows a signal decoder that detects and processes signal information embedded in a frequency</p>

1987 Language	1987 Spec. Reference	1987 Language	1987 Spec. Reference
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		other than a television or radio frequency.	
		In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.	Page 37 lines 26-28.
Column 9 lines 41-44.	The signal processor apparatus described in FIG. 1 can identify such signals in multiple and variable locations in multiple and variable modes, channels, and transmissions.	<i>See generally.</i>	Page 248 line 13 to page 271 lines 30.
Column 9 lines 44-47.	Such signals may be transmitted over and over continuously in such transmissions or they may be transmitted over and over only for predetermined time intervals.	<i>See generally.</i>	Page 457 line 12 to page 463 line 28.
Column 9 lines 47-52.	The controller, 20, is programmed to sequence the local oscillator, 6, to select each desired frequency for a specific time interval in accordance with a predetermined pattern. This pattern may be selected in accordance with standard broadcast and cablecast practices known to exist on that transmission line or frequency.	In programming transmissions, given signals may run and repeat, for periods of time, continuously or at regular intervals. Or they may run only occasionally or only once. They may appear in various and varying locations. Signal processor, 200, is preprogrammed with information that identifies each cable and over-the-air (hereinafter, "wireless") transmission or frequency in the locality of the subscriber station of Fig. 3 as well as the standard broadcast and cablecast practices that apply on said transmissions and frequencies ... In a predetermined fashion, controller, 20, controls oscillator, 6, to sequence local oscillator, 6, in the pattern: cable channel 2, cable channel 4, cable channel 7, cable channel 13, wireless channel 5, wireless channel 9, wireless channel 13, then to repeat said pattern. Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ... Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.	Page 14 lines 3-6. Page 248 line 17 to page 249 line 5. Page 257 line 24 to page 258 line 19.
Column 9 lines 53-55.	The local oscillator, being thus sequenced, will allow each signal decoder, 30 and 40, to receive a particular frequency at	Said detection-complete information causes controller, 20, to cause oscillator, 6, to cause the selection of the next	Page 257 line 24 to page 258 line 19.

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	a particular time interval.		<p>channel in the predetermined television channel selection pattern: wireless channel 9. Automatically oscillator, 6, causes mixer, 3, to select the frequency of channel 9 and input said frequency of interest, at a fixed frequency, to decoder, 30 ...</p> <p>Controller, 20, has capacity for keeping track of elapsed time, and after determining in a predetermined fashion that a particular predetermined period of time has elapsed from the input of wireless channel 9 to decoder, 30, controller, 20, ... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13.</p> <p>Said radio-detection-complete information causes ... controller, 20, to cause oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 99.0 MHz. Automatically oscillator, 6, causes mixer, 2, to select said frequency and input it, at a fixed frequency, to decoder, 40 ...</p> <p>After determining, in a predetermined fashion, that a particular predetermined period of time has elapsed from the input of said 99.0 MHz frequency to decoder, 40, controller, 20, ... causes oscillator, 6, to cause the selection of the next frequency in the predetermined radio frequency selection pattern: 100.0 MHz.</p>
Column 9 lines 55-57.	This will define the timing of the composite outputs of the digital detectors, 34, 37, and 38 in FIG. 2A, and 43 in FIG. 2B.	Page 265 line 27 to Page 266 line 21.	<p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program which is the message of the first combining synch command.</p> <p>Receiving said embedded information causes the binary SPAM information of said first command, with error correcting information, to be detected at detector, 34; ...</p> <p>... said information to radio decoder, 42, which decodes the the embedded signal information of said command and transmits said signal information to digital detector, 43, which detects the binary information with error correcting bit information of said command and transfers said binary and bit information to controller, 44.</p>
		Page 250 lines 13-17.	
		Page 251 lines 8-11.	
		Page 263 lines 19-24.	

Column 9 lines 57-63.	The same controller will control buffer/comparator, 8, to discard received duplicate and partial signals, to mark signals with correct channel identifiers, to transfer signals to decryptor, 10, and processor or monitor, 12, as required, and to perform such other functions as buffer/ comparator, 8, performs.	Page 37 lines 26-28. Page 146 line 31 to page 147 line 3. Page 258 lines 17-25. Page 260 lines 5-13. Page 147 lines 29-31. Page 149 lines 17-20. Page 149 lines 27-29.	<p>In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46.</p> <p>Said failures to match cause the controllers, 20, of said stations automatically ... to cause said buffer/comparators, 8, to discard all received information of said second message; and to cause ... said buffer/comparators, 8, to commence processing in the conventional fashion.)</p> <p>... causes oscillator, 6, to cause the selection of the next channel in the predetermined television channel selection pattern: wireless channel 13. Automatically, oscillator, 6, causes mixer, 3, to select the frequency of channel 13 and input said frequency to decoder, 30. Controller, 20, then transmits a particular preprogrammed wireless-13 instruction to said control processor, 39J, that informs said processor, 39J, wireless channel 13 is inputted to decoder, 30.</p> <p>... commence transferring information from control processor, 39J, to buffer/comparator, 8, then to transmit a message that consists of binary information of a "00" header then the execution segment information of the pseudo command then a meter-monitor segment containing said monitor information in RAM (including the associated channel mark and the format information of said information) then any padding bits required to end said message. (Hereinafter, said message is called the "3rd-old-program-message (#5)".)</p> <p>Then said decrypt-with-J instructions cause controller, 20, to activate the output capacity of buffer/comparator, 8, that outputs to decryptor, 10;</p> <p>Next said decrypt-a-00-header-message instructions cause controller, 20, to cause buffer/comparator, 8, to transfer to decryptor, 10, a quantity of signal words of said binary information of the second message ...</p>
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Column 9 lines 63-65.	The controller, 20, instructs decrypter, 10, what to decrypt and in what fashion.		<p>Decryptor, 10, commences receiving said information, decrypting it using said key J information and transferring it to controller, 12, ...</p> <p>Among said preprogrammed instructions is key information of J, and said instructions cause controller, 20, automatically to select and transfer said key information to decryptor, 10.</p> <p>Decryptor, 10, receives said key information and automatically commences using it as its key for decryption.</p> <p>Decryptor, 10, commences receiving said information, decrypting it using said key J information and transferring it to controller, 12, as quickly as controller, 12, accepts it. The process of decryption proceeds in a particular fashion. Said decrypt-a-00-header-message instructions cause controller, 20, to cause decryptor, 10, to transfer the first H bits without decrypting or altering said bits in any fashion, to decrypt and transfer the next X bits, to transfer the next L bits without decrypting or altering said bits, to decrypt and transfer the next MMS-L bits, and finally, to transfer any bits remaining after the last of said MMS-L bits without decrypting or altering said bits. In this fashion, the cadence information in said message, which is not encrypted, is transferred by decryptor, 10, to controller, 12, without alteration.</p> <p>Then said decrypt-a-00-header-message instructions cause controller, 20, to transmit to controller, 12, a particular <i>transfer-decrypted-message instruction</i> and particular decryption mark information of key J that identifies J as the decryption key.</p> <p>Receiving said instruction and information causes controller, 12, to execute particular preprogrammed <i>transfer-and-meter instructions</i> then record said mark of key J at particular decryption-mark-@12 register memory.</p> <p>Under control of said <i>transfer-and-meter instructions</i>, controller, 12, commences receiving decrypted information of the second message from decryptor, 10.</p> <p>Automatically controller, 12, processes said information of the second message of example #2 as a SPAM</p>
Column 9 lines 65-68.	[Controller, 20] instructs processor or monitor, 12, how to identify what signals to pass externally and where to pass them and what signals to transfer to buffer/comparator, 14.	<p>Page 147 lines 23-28.</p> <p>Page 149 line 27 to page 150 line 6.</p> <p>Page 149 lines 8-16.</p> <p>Page 150 lines 7-9.</p> <p>Page 150 lines 16-21.</p>	

Specification Correlation Chart

			<p>command. Receiving the header and execution segment causes controller, 12, to determine that said message is addressed to URS microcomputers, 205, and to transfer said message accordingly.</p> <p>Receiving said complete-transfer-phase instruction causes controller, 12, to cease transferring information, under control of said <i>transfer-and-meter instructions</i>, to deactivate all output ports, and to commence executing the meter instructions of said transfer-and-meter instructions. Said meter instructions cause controller, 12, to ... transfer to buffer/comparator, 14, particular header identification information that identifies controller, 12, as the source of said transfer the information recorded at said SPAM-meter memory then the information recorded at said decryption-mark-@12 register memory, which information is the decryption mark of key J. (Hereinafter, said meter information generated by the second combining synch command in example #2 is called the "2nd meter information (#2).")</p>	<p>Page 152 line 18 to page 153 line 1.</p>
Column 9 line 68 to column 10 line 2.	The controller, 20, instructs buffer/comparator, 14, what signals to discard and how to mark signals and assemble signal strings.		<p>Buffer/comparator, 14, operates under control of controller, 20, ...</p> <p>Said match causes controller, 20, to execute said instructions. Under control of said first set, controller, 20, initiates assembly of said first meter record by selecting and placing at particular record locations at buffer/comparator, 14, particular record format information, then program unit information from a particular meter-monitor field of said 1st meter & monitor information (#4), origin of transmission information from a second field, date and time of transmission information from a third field, decryption key information from the decryption mark of said 1st meter & monitor information (#4), and finally date and time of processing information from clock, 18.</p> <p>When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, in a predetermined fashion</p>	<p>Page 32 lines 20-21.</p> <p>Page 223 lines 22-33.</p> <p>Page 224 lines 12-18.</p>

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			then discard all information of said record from its memory and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion.
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X. COLUMN 10

Column 10 lines 2-4.	The controller activates digital recorder, 16, thus defining the location in memory of each of the signals and signal strings.	Page 224 lines 12-18.	When said second set is completed, controller, 20, executes said third specified set which causes controller, 20, to cause buffer/comparator, 14, to transfer said second meter record to recorder, 16, ... and to cause recorder, 16, to process and record said transferred meter record in its preprogrammed fashion.
Column 10 lines 4-8.	The controller, 20, also controls the automatic telephone dialing device, 24, which can automatically output the digital information on the digital recorder, 12, to a remote site through a telephone connection, 22.	Page 273 lines 6-11.	Controller, 20, transfers the telephone number, 1-800-AUDITOR, to auto dialer, 24, and causes said dialer, 24, to dial said number. Said first computer answers said telephone call, and in a fashion well known in the art, controller, 20, and said first computer automatically establish telephone communications.
Column 10 lines 8-10.	The controller, 20, can also set the proper time into clock, 18, should this step be necessary.	Page 273 lines 21-25.	... causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.
Column 10 lines 10-13.	The controller, 20, operates in a predetermined fashion that can be altered by external means communicating by means of the telephone connection, 22.	Page 290 lines 14-16. Page 33 lines 18-21.	Automatically, controller, 20, checks the time of the clock, 18, of signal processor, 200, periodically. At a particular commence-enabling time that is a predetermined interval.... Controller, 20, has capacity for controlling the operation of all elements of the signal processor....
Column 10 line 14.	Method of Use at an Intermediate Transmission Point	Page 273 lines 16-25.	Said instruct-to-receive signal causes said first computer automatically to prepare to receive audit records then to transfer a particular start signal via connection, 22, to controller, 20. Receiving said start signal, sent automatically in response to controller, 20's, instruct-to-receive signal, causes controller, 20, to cause recorder, 16, to transmit all recorded meter audit records and particular other audit information to telephone connection, 22, which causes said connection, 22, to transmit said records and information to said first computer.
	Automating Intermediate Transmission Stations	See generally page 324	

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<i>Specification Correlation Chart</i>			

		line 7 to page 390 line 11.	
Column 10 lines 15-20.	The signal processing apparatus outlined in FIGS. 1, A, 2B, and 2C, and their variants as appropriate, can be used to automate the operations of an intermediate transmission point whether it be a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels.	Page 324 lines 8-17.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. ...stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming....
Column 10 lines 20-23.	They can be used in a facility transmitting television programming, radio programming, and making other electronic transmissions.	Page 324 lines 12-14.	Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
Column 10 lines 24-28.	FIGS. 3A, 3B and 3C illustrates one instance of such use. Figure 3 illustrates the use of Signal Processing Apparatus and Methods at a cable television system "head end" transmission facility that cablecasts several channels of television programming.	Page 324 lines 18-21.	The means and methods for transmitting conventional programming are well known in the art.
Column 10 lines 28-30.	The means for and method of transmission of programming described here is well known in the art.	Page 324 lines 21-23.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.
Column 10 lines 30-39.	The facility receives programming from many sources. Transmissions may be received from satellites by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions can be received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions can be received by antenna, 60, and TV demodulator, 61. Other electronic programming input means, 62, can receive programming transmissions.	Page 324 lines 23-31.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire....
Column 10 lines 40-41.	All of these received transmissions feed into the facility by hard-wire and...	Page 324 lines 31-33.	...a conventional matrix switch, 75, well known in the art,....
Column 10 lines 41-42.	...connect, by means of conventional switches (here matrix switch, 75), to...	Page 324 line 34.	...one or more recorder/players, 76 and 78....
Column 10 lines 42-43.	...and/or to equipment that outputs them over various channels to the cable system's field distribution system, 93, which equipment includes here cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system,	Page 324 line 35.	...apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
Column 10 lines 43-47.		Page 325 lines 1-4.	

1981 Spec. Reference	1981 Language	1987 Spec. Reference	1987 Language
<i>Specification Correlation Chart</i>			
92.			
Column 10 lines 48-49.	Programming can also be manually delivered to the facility on prerecorded video tapes and videodiscs.	Page 325 lines 5-6.	Programming can also be manually delivered to said station on prerecorded videotapes and videodiscs.
Column 10 lines 49-52.	When played on video recorder and players, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted to the field.	Page 325 lines 6-9.	When played on video recorders, 76 and 78, or other similar equipment well known in the art, such prerecorded programming can be transmitted via switch 75 to field distribution system, 93.
Column 10 lines 53-57.	In the present art, the identification of incoming programming, however received; the operation of video player and recorder equipment, 76 and 78; and the maintenance of records of programming transmissions are all largely manual operations.	Page 325 lines 10-14.	In the prior art, the identification of incoming programming, however received; the operation of video player and recorder equipment, 76 and 78; and the maintenance of records of programming transmissions are all largely manual operations.
Column 10 lines 58-60.	FIGS. 3A, 3B and 3C shows the introduction of signal processing apparatus and methods to automate these and other operations.	Page 325 lines 15-16.	Fig. 6 shows the introduction of signal processing apparatus and methods to automate these and other operations.
Column 10 lines 61-63.	Incoming programming transmissions are received at the relevant receiver points, antennas, 50, 57, and 60, and other means, 62.	Page 324 lines 23-31.	The station receives programming from many sources. Transmissions are received from a satellite by satellite antenna, 50, low noise amplifiers, 51 and 52, and TV receivers, 53, 54, 55, and 56. Microwave transmissions are received by microwave antenna, 57, and television video and audio receivers, 58 and 59. Conventional TV broadcast transmissions are received by antenna, 60, and TV demodulator, 61. Other electronic programming input transmissions are received by other programming input means, 62.
Column 10 lines 63-64.	They are fed along the conventional paths described above.	Page 324 lines 31-33.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire....
Column 10 lines 64-66.	At distribution amplifiers, 63 through 70, each incoming feed is split into two paths.	Page 325 lines 17-21.	In line between each of the aforementioned receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, and matrix switch, 75, is a dedicated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, that splits each incoming feed into two paths.
Column 10 line 66 to Column 11 line 1.	One is the conventional path whereby programming has flowed and continues to flow to recording devices, 76 and 78, and/or to flow to field distribution system, 93.	Page 325 lines 21-24.	One path is the conventional path whereby programming flows from each given receiver/demodulator/input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, to matrix switch, 75.
		Page 324 line 31 to page 325 line 4.	Each receiver/modulator/input apparatus, 53 through 62, transfers its received transmissions into the station by hard-wire to a conventional matrix switch, 75, well known in the art, that outputs to one or more recorder/players, 76 and 78, and/or to apparatus that outputs said transmissions

Specification Correlation Chart

			over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
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XI. COLUMN 11

Column 11 lines 1-3.	The other path flows from each distribution amplifier, 63 through 70, individually to signal processor, 71.	Page 325 lines 24-27.	The other path inputs the transmission of said given receiver/demodulator/ input apparatus, 53, 54, 55, 56, 57, 58, 59, 60, 61, or 62, individually to signal processor system, 71.
Column 11 lines 3-5.	Signal processor, 71, has means, described above, to identify and separate the instruction and information signals from their associated programming and...	Page 325 line 34 to page 326 line 7.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station;....
Column 11 lines 6-7.	...pass them, along with information identifying the channel source of each signal, externally to code reader, 72.	Page 326 lines 7-11.	...adds, ... source mark information that identifies said associated distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; and transfers said selected messages, with said source mark information, to code reader, 72.
Column 11 lines 8-10.	Signal processor, 71, also has means to record said signals and transfer them to external communications network, 97.	Page 326 lines 11-15.	Signal processor system, 71, also has signal processor means to control signal processor system, 71, to record meter-monitor information of said message information, and to transfer recorded information to external communications network, 97.
Column 11 lines 12-14.	Code reader, 72, passes the received signals, with channel identifiers, to cable program controller and computer, 73.	Page 326 lines 16-18.	Code reader, 72, buffers and passes the received SPAM message information, with source mark information, to cable program controller and computer, 73.
Column 11 lines 15-17.	Cable program controller and computer, 73, is the central automatic control unit for the transmission facility.	Page 326 lines 19-29.	Cable program controller and computer, 73, is the central automatic control unit for the transmission station.
Column 11 lines 18-21.	The controller/computer, 73, has means for receiving input information from local input, 74, and from remote sources via telephone or other data transfer network, 98.	Page 326 lines 27-30.	Computer, 73, has means for receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98.
Column 11 lines 21-22.	Such input information might include the cable television system's complete programming schedule,....	Page 326 lines 30-31.	Such input information can include the complete programming schedule of the station of Fig. 6,....
Column 11 lines 22-24.	...with each discrete unit of programming identified with a unique program code...	Page 326 lines 31-33.	...with each discrete unit of programming identified by its own "program unit identification code" information.
Column 11 lines 25-28.	Such input information might also indicate when and where	Page 326 lines 33-35.	Such input information can indicate when and how the

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	the cable head end facility should expect to receive the programming.		station should expect to receive each program unit,....
Column 11 lines 28-31.	Such input information might also indicate when and on which channel or channels the head end facility should transmit each program unit to cable field distribution system, 93.	Page 326 line 33 to page 327 line 2.	Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit,....
Column 11 lines 32-37.	By means of the signals, with channel indicators, received from code reader, 72, controller/computer, 73, can determine what specific programming and programming unit has been received by each receiver, 53 through 62, and is passing in line on each individual wire to matrix switch, 75.	Page 328 lines 2-7.	By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75.
Column 11 lines 38-39.	By comparing identification signals on the incoming programming...	Page 327 line 35 to page 328 line 13.	Computer, 73, monitors incoming programming by means of the aforementioned dedicated decoders of signal processor system, 71. By means of the SPAM message information, with source mark information, received from code reader, 72, computer, 73, determines what specific program unit has been received by each receiver, 53 through 62, and is passing in line, via each distribution amplifier, 63 through 70, to matrix switch, 75. By comparing selected meter-monitor information of said message information with information of the programming schedule received earlier from input, 74, and/or network, 98, computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming of each received program unit.
		Page 84 lines 26-28.	SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions....
		Page 28 lines 26-27.	...monitor information that identifies what programming is available,....
		Page 49 lines 26-27.	Meter-monitor segments contain meter information and/or monitor information.
Column 11 line 39.	with the programming schedule...	Page 328 lines 9-10.	...with information of the programming schedule,....
Column 11 lines 39-41.	...received earlier from local input, 74, and/or from a remote site via network, 98, ...	Page 328 line 10.	...received earlier from input, 74, and/or network, 98, computer, 73,....
		Page 326 lines 28-30.	...receiving input information from local input, 74, and from

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			remote stations via telephone or other data transfer network, 98.
Column 11 lines 41-43.	... controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programming.	Page 328 lines 11-13.	... computer, 73, can determine, in a predetermined fashion, when and on what channel or channels the station of Fig. 6 should transmit the programming ...
Column 11 lines 44-46.	Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78.	Page 328 lines 14-16.	Computer, 73, has means for communicating control information with matrix switch, 75, and video recorders, 76 and 78,
Column 11 lines 46-50.	If incoming programming is meant for immediate transmission, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer incoming programming to the proper output channel.	Page 328 lines 18-22.	Determining that particular incoming programming is scheduled for immediate retransmission can cause computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer said incoming programming to a scheduled output channel.
Column 11 lines 50-54.	For example, if controller/computer, 73, determines that programming incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, ...	Page 328 lines 22-31.	For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information. ... Receiving said message causes computer, 73, to determine ... that said "code" information matches ... schedule information of programming that is scheduled to be retransmitted immediately upon receipt to field distribution system, 93, via cable channel modulator, 87.
Column 11 lines 54-57.	... controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programming transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.	Page 328 line 31 to page 329 line 1.	In its preprogrammed fashion, so determining causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 63) to matrix switch, 75, from TV receiver, 53, to that output of matrix switch, 75, that outputs to modulator, 87.
Column 11 lines 57-60.	Similarly, if controller/computer, 73, determines that incoming programming should be recorded for delayed transmission, ...	Page 329 line 2-20.	Determining that particular incoming programming is scheduled for time deferred transmission can cause computer, 73, to cause the recording of said programming. For example, computer, 73, receives a given SPAM message that contains given "program unit identification code" information. ... Receiving said message causes computer, 73, to determine, ... that said "code" information matches ... schedule information of programming that is scheduled to be ... transmitted to the field system, 93, at a later time. So determining causes computer, 73, ... to select a video recorder/player, 76 or 78; ... and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
Column 11 lines 60-61.	... controller/ computer, 73, selects a video recorder/player,	Page 329 lines 13-15.	So determining causes computer, 73, ... to select a video

1981 Spec. Reference	1981 Language	1987 Spec. Reference	1987 Language
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Column 11 lines 61-64.	76 or 78, in a predetermined fashion, to record the incoming programming, instructs matrix switch, 75, to transfer the programming to the designated recorder/player, 76 or 78, ...	Page 329 lines 13-20.	recorder/player, 76 or 78; in its preprogrammed fashion, ... to ... record programming; and to cause matrix switch, 75, to configure its switches so as to transfer the programming transmission inputted (via distribution amplifier, 67) from television receiver, 58, to the output that leads to said selected recorder, 76 or 78.
Column 11 lines 64-65.	... and instructs the recorder/player, 76 or 78, to turn on and record the programming.	Page 329 line 15-16.	... to cause said selected recorder, 76 or 78, to turn on and record programming, ...
Column 11 lines 66-67.	Recorder/players, 76 and 78, can communicate programming with each other through matrix switch, 75.	Page 332 lines 24-30.	... causes computer, 73, ... to cause switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record ... unit D.
		Page 333 lines 15-21.	Computer, 73, causes ... switch, 75, to configure its switches so as to transfer the output of recorder, 78, to the input of recorder, 76. Computer, 73, causes recorder, 78, to play and recorder, 76, to record for the duration of program unit Y. ...
Column 11 line 67 to Column 12 line 1.	If controller/ computer, 73, determines at any time that it is necessary ...	Page 331 lines 17-33.	Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. ... Caused to organize the locations of said units to play according to said schedule, computer 73, ...

XII. COLUMN 12

Column 12 lines 1-3.	... to reorganize the order in which programming units are stored on either recorder/player or on both, ...	Page 331 lines 16-25.	Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on a recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D—are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first.
		Page 334 lines 1-6.	In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder because unit D is scheduled to play on the same channel immediately after Y.
For column 12 lines 3-8 see the support provided above for column 16 line 67 to column 12 line 8.	If controller/ computer, 73, determines at any time that it is necessary ...	For example, page 331 lines 17-33.	Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on a recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule. For example, four spot commercials--program units Q, Y, W, and D—are loaded on 76 and 78. D and Q are recorded on the video tape loaded on recorder, 76, with D first. W and Y are recorded on the tape on recorder, 78, with W first. According to the schedule recorded at computer, 73, Q should play first on the cable channel modulated by cable channel modulator, 83; then subsequently Y and W should start to play simultaneously on the channels modulated by modulators, 83 and 87 respectively; then D should play on the channel modulated by modulator, 83, immediately after Y ends. Caused to organize the locations of said units to play according to said schedule, computer 73, ...
		For example, page 332 lines 23-31.	Determining said located space to be available causes computer, 73, to cause recorder, 76, to move forward or rewind to the start of program unit D; to cause recorder, 78, to rewind to the start of said located space; and to cause switch, 75, to configure its switches so as to transfer the output of recorder, 76, to the input of recorder, 78. Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record for the duration of program

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			unit D. ...
			Computer, 73, causes recorder, 78, to move forward or rewind to the start of program unit Y; causes recorder, 76, to rewind to the start of the available space; and causes switch, 75, to configure its switches so as to transfer the output of recorder, 78, to the input of recorder, 76. Computer, 73, causes recorder, 78, to play and recorder, 76, to record for the duration of program unit Y. ...
			In this fashion, computer, 73, causes units Y and W to be located on different recorders because said units are scheduled to be transmitted simultaneously and units Y then D to be located in sequence on the same recorder because unit D is scheduled to play on the same channel immediately after Y.
Column 12 lines 8-12.	Were this head end facility equipped with automatic operating equipment well known in television studios, controller/computer, 73, could pass appropriate operating instructions to such equipment.	For example, page 333 lines 15-21. For example, page 334 lines 1-6.	Executing the information of said intermediate generation set causes computer, 73, also to generate a ... video image... ...and to organize the locations of the recorded program units, D, Q, W, and Y, to play according to the schedule inputted by said distribution station in the fashion described above (in the paragraph of the section, "AUTOMATING INTERMEDIATE TRANSMISSION STATIONS," that begins, "Computer, 73, has capacity for automatically organizing the locations of units....
Column 12 lines 13-16.	Controller/computer, 73, monitors the operation of the head end facility by means of TV signal decoders, 77, 79, 80, 84, and 88, each of which are shown in detail in Fig. 2A.	Page 327 lines 13-15.	Computer, 73, monitors the operation of the head end station by means of TV signal decoders, 77, 79, 80, 84, and 88, each of which are shown in detail in Fig. 2A.
Column 12 lines 16-20.	Controller/computer, 73, has means to communicate control information with each decoder, 77, 79, 80, 84, and 88, to tell each how to operate and how and where to look for signals and to communicate other information.	Page 327 lines 15-18.	Computer, 73, has means to communicate control information with each decoder, 77, 79, 80, 84, and 88, to instruct each how to operate and how and where to search for SPAM information.
Column 12 lines 20-23.	(This particular embodiment could be expanded to include a decrypter, such as decrypter 10 in Fig. 1, in signals-only line between each decoder, 77, 79, 80, 84, and 88, and controller/computer, 73.)	Page 327 lines 13-15. Page 36 lines 32-33.	Computer, 73, monitors the operation of the head end station by means of TV signal decoders, 77, 79, 80, 84, and 88, each of which are shown in detail in Fig. 2A. Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.
		Page 156 line 33.	Fig. 3A shows one such preferred controller, 39.

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language	Specification Correlation Chart
	signals to programming as required.		information as required.	
Column 12 lines 45-47.	Beyond channel combining system and multiplexer, 92, amplifier, 94, transmits programming to signal processor, 71, and signal processor, 96,	Page 337 lines 1-8.	Fig. 6 shows particular signal processor system monitoring apparatus associated with the intermediate station of Fig. 6. In field distribution system, 93, amplifier, 94, inputs programming transmissions to signal processor system, 71, (where said transmissions are inputted to one alternate contact of the switch, 1, of the signal processor of said system, 71), and amplifier, 95, inputs programming transmissions to signal processor, 96,	
Column 12 lines 47-50.	which permits both apparatus to monitor and record all the programming transmitted by the cable television system head end facility to field distribution system, 93.	Page 337 lines 8-12	... which permits both signal processor apparatus to monitor all programming transmitted by the cable television system head end station to field distribution system, 93, in the fashion of the signal processor, 200, of Fig. 3 in example #5.	
Column 12 lines 50-53.	Such records can provide automatically for each channel the information that the Federal Communications Commission requires broadcast station operators to maintain as station logs.	Page 337 lines 12-19.	By recording all different received "program unit identification code" information in the fashion described above, said signal processor apparatus can automatically record, for each transmission channel of the station of Fig. 6, information, for example, that the U. S. Federal Communications Commission requires broadcast station operators to maintain as station logs.	
Column 12 lines 54-56.	Signal processors, 71 and 96, can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99 respectively.	Page 337 lines 19-21.	And said signal processor apparatus can transmit such records of programming to remote sites via telephone or other data transfer networks, 97 and 99, respectively.	
Column 12 lines 57-58.	This particular embodiment describes a transmission facility transmitting only television programming.	Page 339 lines 9-11.	So far this disclosure has described an intermediate transmission station that transmits conventional television programming....	
Column 12 lines 58-61.	The facility could also process and transmit radio programming and other electronic data according to the methods described here ...	Page 339 lines 11-26.	... however, the intermediate station automating concepts of the present invention apply to all forms of electronically transmitted programming. The station of Fig. 6 can process and transmit radio programming in the fashions of the above television programming ... Likewise, said station can transmit broadcast print and data communications programming by adding appropriate transmission and recorder/player means and decoder/detector means with control means and using the same processing and transmitting methods.	
Column 12 lines 61-64.	... by adding radio decoder paths and other signal decoder paths, as shown in FIGS 2B and 2C respectively, to signal processors, 71 and 96, and decoders, 77, 79, 80, 84, and 88.	Page 339 lines 16-21.	... by adding radio transmission and audio recorder/player means, each with associated radio decoder means as shown in Fig. 2B, wherever television means are shown in Fig. 6, all with similar control means to that shown in Fig. 6 and by processing radio programming with appropriately embedded signals according to the same processing and transmitting	

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			methods described above.
Column 12 lines 64-66.	Likewise, these methods are also applicable in a facility that transmits only a single channel of radio or television programming.	Page 339 lines 26-29.	This example has described methods at a multi-channel intermediate transmission station; the methods are also applicable in a station that transmits only a single channel of television, radio, broadcast print or data.
Column 12 line 67.	Methods for Governing the Reception of Programming	See generally page 278 line 22 to page 312 line 30. See generally page 427 line 8 to page 447 line 23.	Regulating the Reception and Use of Programming

XIII. COLUMN 13

Column 13 lines 1-3.	FIGs 4A through 4E illustrate methods for governing the reception of programming and the use of signal processor apparatus in these methods.	Page 286 line 6.	Fig. 4 shows the Signal Processing Programming Reception and Use Regulating System
Column 13 lines 3-9.	All of these methods involve the use of one or more devices, of which various models exist well known in the art, for the decryption of programming transmissions and/or one or more other means for interrupting programming transmissions, also well known in the art, which may be as simple as a switch...	Page 286 line 34 to page 287 line 2.	Fig. 4 shows ... three decryptors, 107, 224 and 231, a signal stripper, 229, and, ...-associated with matrix switch, 258.
Column 13 lines 9-12.	...and which may have means to interrupt programming by generating noise which noise may be an overlay of another audio and/or video transmission.	Page 279 lines 21-29.	Still other techniques, also well known in the art, involve controlling jamming means that spoil transmitted programming at stations that lack authorizing information or are determined not to be duly authorized, thereby degrading the usefulness of said programming. Such other techniques include, for example, inserting so-called "noise" into the transmitted programming which noise may be, for example, overlays of one or more separate transmissions.
Column 13 lines 13-14.	FIG 4A shows a signal processor, 100, and a programming decrypter and/or interrupt means, 101,...	Page 287 lines 22-27.	As Fig. 4 shows, signal processor, 200, controls all the aforementioned apparatus. Signal processor, 200, controls ... matrix switch, 258; ... decryptors, 107, 224 and 230;....
Column 13 lines 14-15.	...each of which receives the same transmission of programming.	Page 299 lines 19-30.	Automatically, controller, 20, causes matrix switch, 258, to transfer the ... video ... from said tuner, 215, ... to decryptor, 224, thereby causing said decryptor, 224, to receive ... said video, and to transfer decrypted information of said video ... to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information inputted from decryptor, 224, to ... signal processor, 200,

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Column 13 lines 16-17.	The devices, 100 and 101, may receive one channel of programming or multiple channels.	Page 286 lines 9-12	The subscriber station of Fig. 4 has capacity for receiving wireless television programming transmissions at a conventional antenna, 199, and a multi-channel cable transmission at converter boxes, 201 and 222.
Column 13 lines 17-20.	The signals that enable the decrypter/interrupter, 101, to decrypt and/or transfer programming uninterrupted may be embedded in the programming or may be elsewhere.	Page 291 lines 9-24	In the interval between said commence-enabling time and said 8:30 PM time, said head end is caused, ... to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions and particular enable-WSW instructions that include particular enable-WSW-programming information, ... on the frequency of said master control channel. (Hereinafter said message is called the "local-cable-enabling-message (#7).") In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, ... In example #7, the controller, 20, of the signal processor, 200, of Fig. 4 is preprogrammed at a particular time with particular information that indicates that the subscriber of said station wishes to view said "Wall Street Week" program when transmission of said program on cable cable 13 commences. particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, ... In the present invention, particular signal processing apparatus (hereinafter called the "signal processor") detect signals and, The scanners/switches, working in parallel or series or combinations, transfer the transmissions to
Column 13 lines 20-21.	Signal processor, 100, identifies, evaluates, possibly decrypts, and passes...	Page 15 lines 7-31.	

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			<p>receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; decryptors that may ... and one or more processor/monitors and/or buffer/comparators that organize and transfer the information stream. The processors and buffers can have inputs from each of the receiver/detector lines and evaluate information continuously. From the processors and buffers, the signals may be transferred to external equipment such as computers,....</p>
Column 13 lines 21-23.	...a signal or signals to decrypter/interrupter, 101 , either at the time of receipt of such programming...	Page 295 lines 24-35.	<p>Automatically, controller, 20, causes matrix switch, 258, to transfer the information of said audio portion inputted from said tuner, 215, to the output that outputs to a selected decryptor, 107, thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio). Automatically, controller, 20, selects information of cipher key Ca from among the information of said portion; transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio information, using said key information and selected decryption cipher algorithm....</p> <p>The second message conveys the second combining synch command. In example #2, before said message is embedded at the program originating studio and transmitted, the execution segment of said command and all of the meter-monitor segment except for the length-token are encrypted, using standard encryption techniques, well known in the art, that encrypt binary information without altering the number of bits in said information. Partially encrypting the second message in this fashion leaves the cadence information of said message unencrypted. In other words, the "00" header, the length- token, and any padding bits added at the end of said message remain unencrypted. Said message is only partially encrypted in order to enable subscriber stations that lack capacity to decrypt said message to process the cadence information of said message accurately.</p> <p>In example #2, the encryption of said execution segment is done in such a fashion that, after encryption, said segment is identical to a particular execution segment that addresses</p>
		See also page 143, lines 10-30.	

1981 Spec. Reference	1981 Language	1987 Spec. Reference	1987 Language
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Column 13 lines 23-24.	...or at a delayed time or a combination.	Page 31 lines 26-29.	URS signal processors, 200, and instructs said processors, 200, to use a particular decryption key J and decrypt the message in which said segment occurs. Controller, 12, receives time information from clock, 18, and has means to delay in a predetermined fashion the transfer of signals when, in a predetermined fashion, delayed transfer is determined to be required.
Column 13 lines 24-25.	The signal or signals instruct decrypter/interrupter, 101, to decrypt the transmission...	Page 298 lines 10-21.	Receiving the "1st-WSW-program-enabling-message (#7) causes controller, 20, to execute the aforementioned load-and-run-@20 instructions, to load the 1st-stage-enable-WSW-program instructions of the information segment at particular RAM of controller, 20, then to execute the information so loaded as the so-called machine language instructions of one so-called job. Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission.
Column 13 lines 26-27.	...or not to decrypt the transmission or to interrupt the transmission...	Page 300 lines 30-32.	Receiving said check-data-loaded signal causes controller, 20, under control of said 1st-stage-enable-WSW-program instructions, to cause the control processor, 39J, ...
		Page 301 lines 1-3.	A match occurs at the station of Fig 4, indicating that decryptor, 224, is decrypting its received information correctly.
		At a station where Page 301 lines 4-31.	(Simultaneously other stations compare selected information of said check sequence to selected information of said 1st-stage-enable-WSW-program instructions. At each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly and suggests that the preprogrammed SPAM operating information of said station may have been tampered with—not resulting in a match causes the controller, 20, of said station to cause all information of said 1st-WSW-program-enabling-message (#7) to be erased from all memory of said station ... thereby disabling said apparatus.)
		with respect to page 297 lines 23-29,	... a particular SPAM message that consists of ... 1st-stage-enable-WSW-program instructions ... (Hereinafter said

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			message is called the "1st-WSW-program-enabling-message (#7)."	
			<p><i>Resulting in a match causes controller, 20, to execute a particular portion of said 1st-stage-enable-WSW-program instructions.</i></p> <p>...microcomputer, 205, to commence transferring the decrypted information of the transmitted video image to monitor, 202M, thereby causing monitor, 202M, to commence displaying, at its television picture tube, the information of the transmitted television image.</p>	
Column 13 line 27.	...or not to interrupt the transmission.	Page 300 lines 30-32	Receiving said check-data-loaded signal causes controller, 20, under control of said 1st-stage-enable-WSW-program instructions, to cause the control processor, 39J,....	
		Page 301 lines 1-3	A match occurs at the station of Fig 4, indicating that decryptor, 224, is decrypting its received information correctly.	
		Page 301 lines 32-34	Resulting in a match causes controller, 20, to execute a particular portion of said 1st-stage-enable-WSW-program instructions.	
		with respect to page 310 lines 20-24.	Receiving said check-data-loaded signal causes controller, 20, under control of said 1st-stage-enable-WSW-program instruct microcomputer, 205, to commence transferring the decrypted information of the transmitted video image to monitor, 202M, thereby causing monitor, 202M, to commence displaying, at its television picture tube, the information of the transmitted television image.	
Column 13 lines 27-29.	The signal or signals may also inform decryptor/interrupter, 101, how to decrypt...	Page 295 line 24 to page 296 line 3.	Automatically, controller, 20, causes matrix switch, 258, to transfer the information of said audio portion inputted from said tuner, 215, to the output that outputs to a selected decryptor, 107, thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio). Automatically, controller, 20, selects information of cipher key Ca from among the information of said portion; transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio information, using said key information and selected	

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		<p>See also page 143, lines 10-30.</p>	<p>decryption cipher algorithm C, and outputting decrypted information of the audio portion of the "Wall Street Week" program transmission to matrix switch, 258.</p> <p>The second message conveys the second combining synchronizing command. In example #2, before said message is embedded at the program originating studio and transmitted, the execution segment of said command and all of the meter-monitor segment except for the length-token are encrypted, using standard encryption techniques, well known in the art, that encrypt binary information without altering the number of bits in said information. Partially encrypting the second message in this fashion leaves the cadence information of said message unencrypted. In other words, the "00" header, the length- token, and any padding bits added at the end of said message remain unencrypted. Said message is only partially encrypted in order to enable subscriber stations that lack capacity to decrypt said message to process the cadence information of said message accurately.</p> <p>In example #2, the encryption of said execution segment is done in such a fashion that, after encryption, said segment is identical to a particular execution segment that addresses URS signal processors, 200, and instructs said processors, 200, to use a particular decryption key J and decrypt the message in which said segment occurs.</p> <p>Receiving said check-data-loaded signal causes controller, 20, under control of said 1st-stage-enable-WSW- program instructions, to cause the control processor, 39J,....</p> <p>(Simultaneously other stations compare selected information of said check sequence to selected information of said 1st-stage-enable-WSW-program instructions. At each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly and suggests that the preprogrammed SPAM operating information of said station may have been tampered with--not resulting in a match causes the controller, 20, of said station to cause all information of said 1st-WSW-program- enabling-message (#7) to be erased from all memory of said station....</p>
<p>Column 13 lines 29-31.</p>	<p>...or interrupt the programming if decrypter/ interrupter, 101, is capable of multiple means.</p>	<p>Page 300 lines 30-32.</p> <p>Page 301 lines 4-14.</p>	<p>Receiving said message causes controller, 20, to load the</p>

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	for the decryption of the transmission.		enable-CC13 instructions and the enable-WSW instructions of the information segment of said message at particular RAM of controller, 20, and execute said instructions as the machine language instructions of one job.
		Page 54 lines 2-6.	An information segment can transmit any information that a processor can process. It can transmit compiled machine language code or assembly language code or higher level language programs, all of which are well known in the art.
		Page 294 lines 28-35.	Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions. Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission,....
		Page 295 line 27 to page 296 line 2.	...thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio). Automatically, controller, 20, selects information of cipher key Ca from among the information of said portion; transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio information, using said key information and selected decryption cipher algorithm C, and outputting decrypted information of the audio portion of the "Wall Street Week" program....
Column 13 lines 33-35.	FIG 4A also shows local input, 102, with means for generating and transmitting signals to signal processor, 100.	Page 288 lines 1-4.	Finally, Fig. 4 shows local input, 225, well known in the art, which has means for generating and transmitting control information to controller, 20, of signal processor, 100.
Column 13 lines 35-36.	Local input, 102, is intended to permit a person at a local receiving site...	Page 288 lines 4-9.	The function of local input, 225, is to provide means whereby a subscriber may input information to the signal processor of his subscriber station, thereby controlling the functioning of his personal signal processor system is specific predetermined fashions that are described more fully below.
Column 13 lines 36-37.	...that is prevented, by any means, from receiving programming...	Page 286 lines 6-8.	Fig. 4 shows the Signal Processing Programming Reception and Use Regulating System that is the third feature of the present invention.
Column 13 lines 37-39.	...to instruct signal processor, 100, that the site wants to be	Page 289 lines 22-33.	In example #7, the controller, 20, of the signal processor,

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	enabled to receive the programming.		<p>200, of Fig. 4 is preprogrammed at a particular time with particular information that indicates that the subscriber of said station wishes to view said "Wall Street Week" program when transmission of said program on cable 13 commences.</p> <p>(So preprogramming controller, 20, can occur in several fashions. For example, prior to a particular time, a subscriber may enter particular please-fully-enable-WSW-on-CC13-at-particular-8:30 information at local input, 225, and cause said information, in a predetermined fashion, to be inputted to controller, 20, by local input, 225.</p> <p>Local input, 225, has capacity to input control instructions to signal processor, 200, and enables the subscriber of the station of Fig. 7 to manually input control instructions at any relevant time.</p> <p>For example, prior to a particular time, a subscriber may enter particular please-fully-enable-WSW-on-CC13-at-particular-8:30 information at local input, 225, and cause said information, in a predetermined fashion, to be inputted to controller, 20, by local input, 225.</p> <p>Local input, 225, has capacity to input control instructions to signal processor, 200, and enables the subscriber of the station of Fig. 7 to manually input control instructions at any relevant time.</p> <p>In the preferred embodiment, local input, 225, is actuated by keys that are depressed manually by the subscriber in the fashion of the keys of a so-called touch-tone telephone or the keys of a typewriter (or microcomputer) keyboard.</p> <p>As Fig. 4 shows, microcomputer, 205, also has capacity for inputting control information ..., and in the preferred embodiment, microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.</p> <p>For example, prior to a particular time, a subscriber may enter particular please-fully-enable-WSW-on-CC13-at-particular-8:30 information at local input, 225, and cause said information, in a predetermined fashion, to be inputted to controller, 20, by local input, 225.</p>
Column 13 lines 39-40.	Local input, 102, may also serve other purposes.	Page 395 lines 30-33.	
Column 13 lines 40-41.	Local input, 102, may convey a continuous signal or an occasional signal or a one-time-only signal.	Page 289 lines 29-33.	
Column 13 lines 42-43.	It may be activated by one or more switches or buttons or combinations.	Page 288 lines 9-13.	
Column 13 lines 43-44.	It may be a computer acting in a predetermined fashion.	Page 288 lines 13-20.	
Column 13 lines 44-47.	The signal may be input to signal processor, 100, as described in FIG 1, at buffer/comparator, 8, or signal processor or monitor, 12, or buffer/comparator, 14.	Page 289 lines 29-33.	

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Column 13 lines 61-62.	...or some combination, as with signal processor 106 in FIG 4C.	Page 290 lines 28-29. Page 291 lines 9-28.	<p>...particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system....</p> <p>In the interval between said commence-enabling time and said 8:30 PM time, said head end is caused, ..., to transmit a particular enabling SPAM message that consists of ... particular enable-CC13 instructions and particular enable-WSW instructions that include particular enable-WSW-programming information, and an end of file signal on the frequency of said master control channel. (Hereinafter said message is called the "local-cable-enabling-message (#7).")</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, select the information of the execution segment in said message, and determine that said selected information matches the aforementioned instance of enable-next-program-on-CC13 information at said particular controlled-function-invoking information location.</p> <p>... "Wall Street Week" program when transmission of said program on cable cable 13 commences.</p> <p>...particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system...</p> <p>Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video ... from said tuner, 215, ... to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video portion ..., to decrypt said information, and to transfer decrypted information of said video ... to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information inputted from decryptor, 224, to the output that that outputs to signal processor, 200, thereby causing signal processor, 200, to receive said information</p> <p>Decryptor, 10, commences receiving said information, decrypting it using said key J information and transferring it</p>
Column 13 lines 63-68.	However, FIGs 4A, 4B, and 4C do not fully illustrate this point because these figures do not reveal that the question of	Page 149 line 27 to page 150 line 6.	

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	the need for decryption prior to reaching the signal processor depends, among other things, on where the signal or signals are placed in the incoming transmission.		to controller, 12, as quickly as controller, 12, accepts it. The process of decryption proceeds in a particular fashion. Said decrypt-a-00-header-message instructions cause controller, 20, to cause decryptor, 10, to transfer the first H bits without decrypting or altering said bits in any fashion, to decrypt and transfer the next X bits, to transfer the next L bits without decrypting or altering said bits, to decrypt and transfer the next MMS-L bits, and finally, to transfer any bits remaining after the last of said MMS-L bits without decrypting or altering said bits. In this fashion, the cadence information in said message, which is not encrypted, is transferred by decryptor, 10, to controller, 12, without alteration.
Column 13 line 68 to column 14 line 1.	A decryptor does not necessarily decrypt the entire transmission.	Page 149 line 27 to page 150 line 6.	Decryptor, 10, commences receiving said information, decrypting it using said key J information and transferring it to controller, 12, as quickly as controller, 12, accepts it. The process of decryption proceeds in a particular fashion. Said decrypt-a-00-header-message instructions cause controller, 20, to cause decryptor, 10, to transfer the first H bits without decrypting or altering said bits in any fashion, to decrypt and transfer the next X bits, to transfer the next L bits without decrypting or altering said bits, to decrypt and transfer the next MMS-L bits, and finally, to transfer any bits remaining after the last of said MMS-L bits without decrypting or altering said bits. In this fashion, the cadence information in said message, which is not encrypted, is transferred by decryptor, 10, to controller, 12, without alteration.

XIV. COLUMN 14

Column 14 lines 1-2.	Encrypted transmissions may be only partially encrypted.	Page 288 line 30 to page 289 line 4.	In example #7, the program originating studio that originates the "Wall Street Week" transmission transmits a television signal that consists of so-called "digital video" and "digital audio," well known in the art. Prior to being transmitted, the digital video information is doubly encrypted, ... The digital audio is transmitted in the clear. Prior to being transmitted, the digital video information is doubly encrypted, ... The digital audio is transmitted in the clear.
Column 14 lines 2-3.	For example, only the video portion of the transmission may be encrypted.	Page 288 line 33 to page 289 line 3.	The digital audio is transmitted in the clear.
Column 14 lines 4.	The audio portion may remain unencrypted.	Page 289 lines 3-4.	Subsequently, but still in the interval between said commence-enabling time and said 8:30 PM time, said
Column 14 lines 4-9.	In such a circumstance, a connection such as that shown in FIG 4B could pass unencrypted signals to signal processor	Page 297 lines 20-32.	

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	103, while passing a transmission unsuitable for satisfactory viewing, if the signals were placed in the audio portion of the overall transmission.		program originating studio embeds in the audio portion and transmits a particular SPAM message that consists of ... particular 1st-stage-enable-WSW-program instructions as the information segment information, and an end of file signal. (Hereinafter said message is called the "1st-WSW-program-enabling-message (#7).") In the fashions described above, so transmitting said SPAM message causes signal processor, 200, ... to detect the information of said message ...
Column 14 lines 10-12.	...a method that provides a signal or signals to signal processor, 106, prior to decryption...	Page 291 lines 9-24.	In the interval between said commence-enabling time and said 8:30 PM time, said head end is caused, in a predetermined fashion, to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions and ... enable-WSW instructions ... on the frequency of said master control channel. (Hereinafter said message is called the "local- cable-enabling-message (#7).") In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message,....
Column 14 lines 12-14.	...which signal or signals enables decryptor/interruptor, 107, to decrypt and/or pass programming transmissions it receives...	Page 294 line 28 to page 295 line 34.	Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions. Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission, ... thereby causing said tuner, 215, to receive the information of cable channel 13 and output the audio and video portions of said information to matrix switch, 258, on the separate audio and video outputs of said tuner, 215. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of said audio portion inputted from said tuner, 215, to the output that outputs to a selected decryptor, 107, thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio). Automatically, controller, 20, ... causes decryptor, 107, to commence decrypting its received audio information, ...
Column 14 lines 14-17.	...then signal processor, 106, searches in a predetermined fashion for a second signal or set of signals in the decrypted output of decryptor/interruptor, 107.	Page 296 lines 3-23.	Automatically, controller, 20, causes matrix switch, 258, to transfer the information inputted from decryptor, 107, to the output that that outputs to signal processor, 200, thereby

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			causing signal processor, 200, to receive said information at a particular third alternate contact of switch, 1, (that is not shown in Fig. 2). Automatically, controller, 20, ... causes switch, 1, to connect to said third contact, thereby inputting said information to mixer, 3; and causes mixer, 3, (by control transmission means via oscillator, 6) to transfer said information without any modification; causes the control processor, 39J, of decoder, 30, to cause the filter, 31, and modulator, 32, to transfer said information without any modification; causes said control processor, 39J, ... to cause digital detector, 38, to commence inputting detected information to controller, 39; and causes said control processor, 39J, to commence waiting to receive the header information of a SPAM message.
		Page 300 lines 10-21.	<p>In due course, but still before said 8:30 PM time, said program originating studio embeds in the video portion and transmits particular SPAM check information that is not a SPAM message and consists only of a particular check sequence of binary information followed by an end of file signal. (Hereinafter said SPAM check information is called the "1st- WSW-decryption-check (#7).") ...</p> <p>Receiving the binary information of said check sequence at decoder, 30, causes digital detector, 38, to detect said information and causes control processor, 39J, to ...</p> <p>(Simultaneously other stations compare selected information of said check sequence to selected information of said 1st-stage-enable- WSW-program instructions. At each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly and suggests that the preprogrammed SPAM operating information of said station may have been tampered with--not resulting in a match causes the controller, 20, of said station ... then to transmit the aforementioned appearance-of-tampering information together with complete information of the unique digital code that identifies said station uniquely. ... thereby disabling said apparatus.)</p>
Column 14 lines 17-21.	If this second signal or set of signals fails to appear in the form or forms and place or places and time or times that signal processor, 106, expects, signal processor, 106, can respond in a predetermined fashion and generate...	Page 301 lines 4-31.	
Column 14 lines 21-22.	...and record in digital recorder, 16 (referring to Fig. 1),...	Page 31 line 30 to page 32 line 2.	<p>Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records") in a</p>

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Column 14 lines 22-25.	...information that reports this fact in a predetermined fashion and/or transfer this information immediately to a remote site by telephone means and/or ...	Page 301 lines 4-25.	predetermined fashion or fashions; and transmits said signal records to a digital recorder, 16, and/or to one or more remote sites. ... , then to ... , to cause the auto dialer, 24, and telephone connection, 22, of said station to establish telephone communications with a particular predetermined remote station, in the fashion described above, and causes controller, 20, then to transmit the aforementioned appearance-of-tampering information together with complete information of the unique digital code that identifies said station uniquely. ... And for example, determining that a local station is not preprogrammed properly and/or that decryption ... apparatus are not functioning correctly may cause apparatus of said station to perform other steps of disabling and/or communicating--eg., the local apparatus may disable local apparatus selectively and only partially by, for example, preventing a decoder, ...
Column 14 lines 25-27.	generate and transmit to decryptor/interruptor, 107, instructions that disable decryptor/interruptor, 107.	Page 311 line 33 to page 312 line 4. Page 301 lines 4-31.	(Simultaneously other stations compare selected information of said check sequence to selected information of said 1st-stage-enable-WSW-program instructions. At each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly and suggests that the preprogrammed SPAM operating information of said station may have been tampered with--not resulting in a match causes the controller, 20, of said station to cause all information of said 1st-WSW-program-enabling-message (#7) to be erased from all memory of said station ... thereby disabling said apparatus.)
Column 14 lines 28-32.	FIG 4D shows that a multi-stage decryption/interruption process may be used in which transmissions must be processed by one or more additional decryptor/interruptors, 111, that follow decryptor/interruptor, 110.	Page 299 lines 13-27.	Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, thereby

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		Page 305 lines 9-31.	causing said decryptor, 224, to receive the information of said video portion (said information being, as explained above, encrypted digital video), to decrypt said information, and to transfer decrypted information of said video portion to matrix switch, 258. Executing said 2nd-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, ... to affect a second and last stage of decrypting the digital video information of the "Wall Street Week" program transmission. ... Automatically, controller, 20, causes matrix switch, 258, ... to commence transferring the information inputted from decryptor, 224, to the output that outputs ... to decryptor, 231; ...
Column 14 lines 33-35.	FIG 4E illustrates that the signal processor, 112, can monitor multiple channels and pass instructions to multiple decryptor/interruptors,...	Page 308 lines 19-20.	...indicating that decryptors, 224 and 231, are decrypting received information correctly.
		Page 29 lines 8-15.	At switch, 1, and mixers, 2 and 3, signal processor, 26, monitors all frequencies or channels available for reception at the subscriber station of Fig. 2 to identify available programming. The inputted information is the entire range of frequencies or channels transmitted on the cable and the entire range of broadcast television transmissions available to a local television antenna of conventional design.
		Page 287 lines 22-29.	As Fig. 4 shows, signal processor, 200, controls all the aforementioned apparatus. Signal processor, 200, controls ... decryptors, 107, 224 and 230; ...
Column 14 lines 35-37.	...each of which processes fewer channels than the multiple channels processed by signal processor, 112.	Page 299 lines 13-27.	Automatically, controller, 20, ... causes decryptor, 224, to commence decrypting any received information, ... and outputting decrypted information to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer ... the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video portion (said information being, as explained above, encrypted digital video), to decrypt said information, and to transfer decrypted information of said video portion to matrix switch, 258.
		Page 305 lines 9-32.	Executing said 2nd-stage-enable-WSW-program instructions causes controller, 20, ... to commence

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			receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information; decryptors that may ... and one or more processor/monitors and/or buffer/comparators that organize and transfer the information stream. The processors and buffers can have inputs from each of the receiver/detector lines and evaluate information continuously. From the processors and buffers, the signals may be transferred to external equipment such as computers, ...
Column 14 lines 42-43.		289 lines 12-15.	In example #7, the intermediate station that retransmits "Wall Street Week" program information to the subscriber station of Fig. 4 is a cable television system head end (such as the head end of Fig. 6).
Column 14 lines 43-44.	Cable converter box, 114 , of which many types are now available,.... ...with means for informing signal processor, 112 , which channel of programming it is transferring,....	Page 295 line 8.	...converter box, 201,
Column 14 lines 45-46.	...receives the same multi-channel transmission and transfers one channel to decryptor/interruptor, 115 .	Page 295 line 6 to page 296 line 7. Page 295 lines 6-29.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its received information of said frequency (which information is received by means of its multi-channel cable system transmission input) to a selected output frequency and transfer said information;... thereby causing signal processor, 200, to receive said information Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its received information of said frequency (which information is received by means of its multi-channel cable system transmission input) to a selected output frequency and transfer said information at said frequency to matrix switch, 258. ... Automatically, controller, 20, causes matrix switch, 258, to transfer the information inputted from said box, 201, to the output that outputs to television tuner, 215, and causes said tuner, 215, to tune to said selected frequency, thereby causing said tuner, 215, to receive the information of cable channel 13 and output the audio and video portions of said information to matrix switch, 258, on the separate audio and video outputs of said tuner, 215. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of said audio portion inputted from said tuner, 215, to the

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Column 14 lines 46-49.	The signal or signals necessary for the decryption of the channel that box, 114, passes to decryptor/interruptor, 115, ...	Page 299 lines 13-25.	output that outputs to a selected decryptor, 107, to receive the information of said audio portion.... Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video portion (said information being, as explained above, encrypted digital video), to decrypt said information,....
Column 14 lines 49-50.	...in this case, is not located in the channel transmission.	Page 298 line 34 to page 299 line 1.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba.
Column 14 lines 50-51.	They may be preprogramed into the signal processor (for example,...	Page 299 lines 13-17.	Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B,....
Column 14 lines 51-52.	...in programmable random access memory controller, 20, in Fig. 1)...	Page 298 line 33 to page 299 line 1.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba.
Column 14 lines 52-54.	...or they may be transmitted in a channel other than the channel being transferred from box, 114.	Page 293 line 20.	...such as, for example, the RAM of controller, 20,....
		Page 291 lines 10-20.	...said head end is caused, in a predetermined fashion, to transmit a particular enabling SPAM message that consists of ... enable-CC13 instructions and ... enable-WSW instructions that include particular enable-WSW-programming information, ... on the frequency of said master control channel. (Hereinafter said message is called the "local- cable-enabling-message (#7).") ...
		Page 289 lines 25-27.	... said "Wall Street Week" program when transmission of said program on cable cable 13 commences. ...

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		Page 290 lines 28-29.	... particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system....
		Page 294 lines 28-35.	Resulting in a match causes controller, 20, to execute a particular portion of said enable-CC13 instructions. Executing the instructions of said portion causes controller, 20, in the predetermined fashion of the said portion, to cause selected apparatus of the station of Fig. 4 to receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission,....
Column 14 lines 54-55.	If signal processor, 112, has been preprogrammed with the signal or signals...	Page 298 line 33 to page 299 line 1.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key Ba.
Column 14 lines 55-58.	...or if it has been informed of the predetermined fashion for identifying and processing the needed signal or signals in the incoming transmission from facility, 113,...	Page 289 line 22 to page 290 line 10.	In example #7, the controller, 20, of the signal processor, 200, of Fig. 4 is preprogrammed at a particular time with particular information that indicates that the subscriber of said station wishes to view said "Wall Street Week" program when transmission of said program on cable 13 commences. ... Receiving any given instance of please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to select particular WSW-on-CC13-at-particular-8:30 information in said received information, record said selected information at particular memory, and execute particular receive-authorizing-info-at- appointed-time instructions. ...
Column 14 lines 58-59.	...for example, where to look for the signals...	Page 290 lines 11-12.	In a predetermined fashion, executing said instructions causes controller, 20,....
		Page 290 lines 26-30.	... causes the oscillator, 6, then to cause switch, 1, and mixer, 3, to select information of a particular master cable control channel (that may or may not be cable channel 13) from the multi-channel cable system transmission inputted to signal processor, 200,....
		OR Page 298 lines 17-18.	Executing said 1st-stage-enable-WSW-program instructions causes controller, 20,....
		Page 298 line 34 to page 299 line 1.	At the station of Fig. 4, the preprogrammed information of said sixteen contiguous bit locations is decryption cipher key

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Column 14 line 59.	...and when...	Page 290 lines 11-17. OR Page 297 lines 20-21.	Ba. ... In a predetermined fashion, executing said instructions causes controller, 20, causes prepare to receive a particular enabling SPAM message at a particular time. Automatically, controller, 20, checks the time of the clock, 18, of signal processor, 200, periodically. At a particular commence-enabling time that is a predetermined interval prior to the aforementioned 8:30 PM time.... Subsequently, but still in the interval between said commence-enabling time and said 8:30 PM time, ... In a predetermined fashion, executing said instructions causes controller, 20,.... ...transmits particular preprogrammed enable-next-program-on-CC13 information to the control processor, 391, of said decoder, 30, and causes said control processor, 391, to place one instance of said information at a particular controlled-function-invoking information location; causes the oscillator, 6,.... In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at decoder, 30, (to which said master control channel is inputted), to detect the information of said message, select the information of the execution segment in said message, and determine that said selected information matches the aforementioned instance of enable-next-program-on-CC13 information at said particular controlled-function-invoking information location. ... Automatically, controller, 20, selects information of cipher key Ca from among the information of said portion; transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio information, using said key information and selected decryption cipher algorithm C, and outputting decrypted information of the audio portion.... Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted
Column 14 line 59.	...and how,...	Page 290 lines 11-12, lines 21-26. Page 291 lines 21-28.	
Column 14 lines 59-61.	...signal processor, 112, can transfer the signal to decryptor/interruptor, 115.	Page 295 line 30 to page 296 line 1. Page 299 lines 13-18.	

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			<p>receive the cable channel 13 transmission, to cause selected apparatus to decrypt the audio portion of said transmission,....</p> <p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its received information of said frequency (which information is received by means of its multi-channel cable system transmission input) to a selected output frequency and transfer said information at said frequency to matrix switch, 258. ... Automatically, controller, 20, causes matrix switch, 258, to transfer the information of said audio portion ... to a selected decryptor, 107, thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio).</p>	<p>Page 295 lines 6-30.</p>
Column 15 lines 9-11.	...in order to identify and process correctly the programming transmitted on another.		<p>In due course, but still before said 8:30 PM time, said program originating studio embeds in the video portion and transmits particular SPAM check information....</p> <p>Receiving said check-data-loaded signal causes controller, 20, under control of said 1st-stage-enable-WSW- program instructions, to cause the control processor, 39J, of decoder, 30, to transfer to controller, 20, selected information of said check sequence of binary information and compare said selected information to selected information of said 1st-stage-enable-WSW-program instructions. A match occurs at the station of Fig 4, indicating that decryptor, 224, is decrypting its received information correctly.</p> <p>...controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video ... to decryptor, 224, thereby causing said decryptor, 224, to receive the information of said video....</p>	<p>Page 300 lines 10-12,</p> <p>Page 300 line 30 to page 301 line 3.</p> <p>Page 299 lines 19-23.</p>
Column 15 lines 11-12.	In Fig. 4E, the signal or signals needed to operate decryptor/interruptor, 115, correctly...		<p>Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission.</p>	<p>Page 298 lines 17-21.</p>
			Automatically, controller, 20, transfers said decryption	Page 299 lines 13-18.

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			cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258.
Column 15 lines 13-14.	...may be on a separate channel of programming that is, itself, encrypted in transmission.	Page 297 lines 20-29.	Subsequently, but still in the interval between said commence-enabling time and said 8:30 PM time, said program originating studio embeds in the audio portion and transmits a particular SPAM message that consists of ... 1st-stage-enable-WSW-program instructions as the information segment information, and an ... (Hereinafter said message is called the "1st-WSW-program-enabling-message (#7).")
		Page 294 lines 33-35.	...to cause selected apparatus to decrypt the audio portion of said transmission, ...
Column 15 lines 14-15.	Signal processor, 112, can transfer the correct signal or signals...	Page 297 line 28 to page 298 line 9.	(Hereinafter said message is called the "1st-WSW-program-enabling-message (#7).") In the fashions described above, so transmitting said SPAM message causes signal processor, 200, ... to execute the aforementioned transfer-this- message-to-controller-20 instructions. Executing said instructions causes said control processor, 39J, to transfer the information of said message to controller, 20, in the fashion of the local-cable- enabling-message (#7).
Column 15 lines 15-16.	...only if cable converter box, 117, is tuned to the proper channel and ...	Page 295 lines 6-30.	Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its received information of said frequency (which information is received by means of its multi-channel cable system transmission input) to a selected output frequency and transfer said information at said frequency to matrix switch, 258. ... Automatically, controller, 20, causes matrix switch, 258, to transfer the information of said audio portion ... to a selected decryptor, 107, thereby causing said decryptor, 107, to receive the information of said audio portion (said information being, as explained above, encrypted digital audio).
Column 15 lines 17-19	...decryptor/interruptor, 118, can transfer a correctly decrypted transmission to signal processor, 112, for processing.	Page 295 line 30 to page 296 line 6.	Automatically, controller, 20, selects information of cipher key Ca from among the information of said portion; transfers said cipher key information to decryptor, 107; and causes decryptor, 107, to commence decrypting its received audio

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Column 15 lines 20-22.	In any of the cases illustrated in FIGs 4A through 4E, signal processors, 100, 103, 106, 109, and 112, could also operate in a predetermined fashion...		information, ... and outputting decrypted information of the audio portion ... to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information inputted from decryptor, 107, to the output that outputs to signal processor, 200, And for example, determining that a local station is not preprogrammed properly and/or that decryption, ... apparatus are not functioning correctly may cause apparatus of said station to perform other steps of disabling and/or communicating.... At each station where a match fails to occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion.... ... each station where a match fails to occur--which indicates that a decryptor, 224, is not decrypting its received information correctly.... At each station where a ... a match does not result--which indicates that a decryptor, 224 or 231, is not decrypting its received information correctly.... ...may interrogate remote station apparatus, by telephone, for cipher key and/or cipher algorithm instructions and information.
Column 15 lines 22-25.	...and telephone a remote site to get an additional signal or signals necessary for the proper decryption and/or transfer of incoming programing transmissions.	Page 311 line 33 to page 312 line 2. Page 293 lines 32-35. Page 301 lines 6-9. Page 308 line 35 to page 309 line 3. Page 312 lines 6-8.	
Column 15 line 26.	Methods for Monitoring Reception and Operation	See generally page 162 line 27 to page 193 line 10, and page 312, line 32 to page 324 line 5. Page 28 lines 25-29.	Monitoring Receiver Station Reception and Operation
Column 15 lines 27-30.	FIG 5 illustrates methods for monitoring reception and operation which methods can be used to gather statistics on programing usage and associated uses of other data transmissions and equipment.	Page 312 line 33 to page 313 line 8.	[Signal processor 200 in Fig. 7 and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation ... The means and methods facilitate the collection of statistics that identify not only what programming is received and displayed at given subscriber stations but also, for example, which local

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Column 15 lines 30-32.	Such statistics are necessary, for example, in the development of television program ratings.	Page 28 lines 29-35.	apparatus receives programming and which displays programming, how received programming is processed, what local apparatus is controlled in the course of processing ... [Signal processor 200 in Fig. 7 and elsewhere] has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
Column 15 lines 33-39.	FIG 5 shows two conventional TV sets, 132 and 144, a conventional video cassette recorder, 135, a conventional videodisc player, 137, a conventional radio, 141, a conventional microcomputer, 142, a conventional data printer, 146, and a television set, 148, that is capable of displaying two different television programming transmissions at once.	Page 162 lines 31-34.	... signal processing apparatus and methods are used to collect monitor information for so-called "program ratings" (such as so-called "Nielsen ratings") that estimate the sizes of television (or radio) program audiences.
Column 15 lines 39-41.	This is only a representative group of equipment. Many other types of television and radio players and recorders could be included in FIG 5.	Page 313 line 16 to page 314 line 16.	Fig. 5 shows a variety of input apparatus with capacity for inputting programming (including SPAM information) selectively, via matrix switch, 258, to apparatus of the subscriber station of Fig. 5, intermediate apparatus with capacity for processing and/or recording inputted programming selectively, and output apparatus for displaying or otherwise outputting programming selectively to human senses. Input apparatus include ... Laser disc player, 232, ... videodisc player") ... Intermediate apparatus include microcomputer, 205, radio tuner & amplifier, 213, TV tuner, 215, audio recorder/player, 255, and video recorder/player, 217, all of which are well known in the art Output apparatus that display or otherwise output programming selectively to human senses include, for example, TV monitor, 202M, multi-picture television monitor, 148, speaker system, 263, and printer, 221,.... (This is only a representative group of equipment; many other types of communications and computer apparatus could be included in Fig. 5.)
Column 15 lines 42-43.	Except for the videodisc player which neither records nor displays programming or other data,...	Page 314 lines 17-19.	Input apparatus include ... Laser disc player, 232, ... videodisc player") ...
Column 15 lines 43-44.	...each unit has an appropriate associated signal decoder.	Page 313 lines 24-30.	Associated with each intermediate apparatus and output apparatus is one or more appropriate decoders.
Column 15 lines 44-46.	Each decoder is likely to be located physically inside its associated player/ recorder unit.	Page 314 lines 20-21.	At other output system, 261, is other decoder, 286. Each decoder is likely to be located physically inside the unit of its associated intermediate or output apparatus.
Column 15 lines 46-49.	Each is located at a point in the associated unit's circuitry where it receives every embedded signal on the programming	Page 314 lines 31-33.	In the preferred embodiment, each one of said decoders is located at a point in the circuitry of its associated apparatus
Column 15 lines 49-51.	Each is located at a point in the associated unit's circuitry where it receives every embedded signal on the programming	Page 315 lines 14-19.	In the preferred embodiment, each one of said decoders is located at a point in the circuitry of its associated apparatus

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	channel or data channel to which the unit is tuned...		where said one receives (so as to detect all SPAM information on) the information of the selected frequency, channel or transmission to which its associated apparatus is tuned.
Column 15 lines 49-51.	...for which signal the decoder is programmed in a predetermined fashion to search.	Page 315 lines 20-24.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
Column 15 lines 52-56.	If a unit like the microcomputer can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.	Page 317 lines 2-6.	If a given intermediate or output apparatus can receive transmissions from more than one source or of more than one kind--television, radio, or other--it will have sufficient apparatus to monitor every channel and kind of transmission it can receive.
Column 15 line 57.	The signals for which the decoders are monitoring...	Page 315 lines 20-24.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
		Page 44 lines 26-32.	Commands often contain meter-monitor segments. Said segments contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described more fully below.
Column 15 lines 58-60.	...are likely to be unique digital codes that may identify each programming or data unit received and the source of each.	Page 49 lines 26-28.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:
Column 15 lines 60-62.	They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission.	Page 50 lines 14-20.	...unique codes for programming; ... and unique codes that identify the sources and suppliers of computer data.
		Page 49 lines 26-28.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:
		Page 50 lines 1-4.	...origins of transmissions (eg., network source stations, broadcast stations, cable head end stations); dates and times....
Column 15 lines 62-63.	They may convey unique identifier codes for each program or commercial.	Page 49 lines 26-28.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such

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			information include:
		Page 50 lines 6-7.	...unique identifier codes for each program unit (including commercials);....
Column 15 lines 63-65.	In the case of data transmitted to the micro- computer, they may be unique codes that identify the source and suppliers of the data.	Page 49 lines 26-28.	Meter-monitor segments contain meter information and/or monitor information. Examples of categories of such information include:....
Column 15 lines 65-68.	In the case of data received at the printer, they may identify publications, articles, publishers, distributors, advertisements, etc.	Page 50 lines 19-20.	...unique codes that identify the sources and suppliers of computer data.
		Page 425 lines 35 to page 426 line 1.	...and causes said AT&T news item to be printed at said printer, 221.
		Page 421 lines 13-15.	...meter-monitor segment that contains the "program unit identification code" information of said AT&T news item and subject matter information of said binary information of "T",....
Column 15 line 68- Column 16 line 2.	The decoders, 131, 136, 138, 143, 145, 147, 149, and 150, may search for many types of codes, and the types described here provide only examples.	Page 50 lines 23-26.	The categories listed here provide only examples. Other types of information can exist in meter information and/or in monitor information, as will become apparent in this full specification.

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Column 16 lines 3-4.	In FIG 5, each decoder receives every relevant signal received by its associated player or recorder unit.	Page 314 lines 34-35.	At any given subscriber station, any given SPAM decoder may merely monitor the operation of its associated....
		Page 315 lines 20-24.	Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.
Column 16 lines 5-10.	For example, TV set, 131, may receive programming from many sources including cable converter box, 133, video cassette recorder, 135, and videodisc player, 137. In every programming unit played on TV set, 132, TV decoder, 131, receives every signal for which it is instructed to search in a predetermined fashion and...	Page 313 lines 16-23.	Fig. 5 shows a variety of input apparatus with capacity for inputting programming (including SPAM information) selectively, via matrix switch, 258, to apparatus of the subscriber station of Fig. 5, intermediate apparatus with capacity for processing and/or recording inputted programming selectively, and output apparatus for displaying or otherwise outputting programming selectively to human senses.

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Column 16 lines 10-11.	...transfers the signals to signal processor, 130,...	Page 314 lines 20-28.	Associated with each intermediate apparatus and output apparatus is one or more appropriate decoders. ... At TV tuner, 215, is TV decoder, 282. ... At TV monitor, 202M, is TV decoder, 145.	
Column 16 lines 11-13.	... which has means to identify the source decoder from which each signal that it receives comes.	Page 315 lines 6-8. Page 315 lines 20-24.	Fig. 5 shows each decoder as having capacity for transferring monitor information to signal processor, 200, by bus communications means. Each one of said decoders is preprogrammed to detect and transfer to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message in the transmission to which its associated apparatus is tuned.	
Column 16 lines 13-18.	On all programming recorded by video cassette recorder, 135, decoder, 136, receives every relevant signal and transfers such signals to signal processor 130. Radio signal decoder, 138, operates similarly for radio, 141. Other signal decoder, 143, for microcomputer 142.	Page 322 lines 33-35. Page 174 lines 4-14.	... monitor information (#3) except that the source mark information identifies decoder, 282, rather than decoder, 203. Under control of said instructions, said match causes control processor, 39J, to cause matrix switch, 39I, to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, (while said switch is simultaneously transferring information from control processor, 39J, to the CPU of microcomputer, 205); to transfer to said buffer/comparator, 14, header information that identifies a transmission of monitor information then particular decoder-203 information that is the source mark of said decoder, 203,....	
Column 16 lines 18-21.	TV signal decoder, 145, for TV set, 144 (which may receive programming inputs and associated signals generated or transferred by microcomputer, 142).	Page 314 lines 20-26. Page 322 line 26 – Page 323 line 11.	Associated with each intermediate apparatus and output apparatus is one or more appropriate decoders. At radio tuner & amplifier, 138, are radio decoder, 138, and other decoder, 281. ... At video recorder/player, 217, is TV decoder, 218. At microcomputer, 205, is TV decoder, 203. The programming of said "Wall Street Week" program is received at tuner, 215, and displayed at monitor, 202M. Accordingly, transmitting said messages will also cause the decoder associated with tuner, 215-- decoder, 282--to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is identical to said 1st monitor information (#3) and 2nd monitor information (#3) except that the source mark information identifies decoder, 282, rather than decoder, 203. Likewise, unless the Fig. 1B information overlaid at microcomputer, 205, covers and obliterates the embedded information of said messages that is	

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			inputted from divider, 4, to microcomputer, 205, and would otherwise be transmitted to monitor, 202M, in the combined programming outputted by microcomputer, 205, (which covering and obliterating does not occur in example #3), transmitting said messages will also cause the decoder, 145, to detect, process, and transmit monitor information of said messages to onboard controller, 14A, that is also identical to said 1st and 2nd monitor information (#3) except that the source mark information identifies decoder, 145.
Column 16 lines 21-24.	Other signal decoder, 147, for printer 146. And TV signal decoders, 150 and 149, for each channel of programming received and displayed by multi-picture TV set, 148.	Page 314 lines 20-30.	Associated with each intermediate apparatus and output apparatus is one or more appropriate decoders. ... At multi-picture TV monitor, 148, are TV decoders, 149 and 150. ... At printer, 221, is other decoder, 227.
Column 16 lines 25-32.	One particular advantage of these methods for monitoring programming is that, by locating the identifier signals in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded on video cassette recorders and on how people replay such recordings.	Page 319 lines 23-30.	One particular advantage of these methods for monitoring programming is that, by embedding the SPAM information in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video cassette recorders, these methods provide techniques for gathering statistics on what is recorded, for example, on video and audio cassette recorders and on how people replay such recordings.
Column 16 lines 32-35.	For example, a person might instruct video cassette recorder, 135, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.	Page 319 lines 30-33.	For example, a subscriber might instruct video recorder/player, 217, automatically to record the NBC Network Nightly News as broadcast over station WNBC in New York City.
Column 16 lines 35-39.	Recorder, 135, might receive the programming over Manhattan Cable TV channel 4 and record the programming from 7:00 PM to 7:30 PM on the evening of July 15, 1985.	Page 319 line 33 – Page 320 line 2.	Recorder, 217, might receive the programming over Manhattan Cable TV channel 4 and record the programming at the time of original broadcast transmission--from 7:00 PM to 7:30 PM on the evening of July 15, 1985.
Column 16 lines 39-41.	Each discrete bit of this information could be conveyed to recorder, 135, in a signal unit or units in the programming so received and recorded.	Page 320 lines 2-8.	Each discrete bit of this information could be transmitted to the subscriber station of Fig. 5 in meter-monitor information ... embedded in the transmitted programming. So embedding and transmitting said meter-monitor information would cause recorder, 217, to record said information.
Column 16 lines 41-43.	Decoder, 136, would identify these signals and transfer them to signal processor, 130.	Page 320 lines 9-10.	...decoder, 218, would detect said information and transfer said information to signal processor, 200, ...
Column 16 lines 43-45.	Subsequently, the person might play the recorded programming on TV set, 132, from 10:45 PM to 11:15 PM the same evening.	Page 320 lines 24-26.	Subsequently, the subscriber might play back the recorded programming and view said programming on TV monitor, 202M, from 10:45 PM to 11:15 PM the same evening.
Column 16 lines 45-47.	This time, TV signal decoder, 31, identifies the embedded signals and transfers them to signal processor, 131.	Page 320 lines 27-31.	So playing back and transmitting the recorded programming to monitor, 202M, would cause TV signal decoder, 145, to detect said meter-monitor information and transfer said

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Column 16 lines 47-49.	Prerecorded video cassettes and videodiscs could also contain unique embedded codes that would identify their usage...	Page 321 lines 1-5.	information, together with appropriate source mark information, to signal processor, 131.... Prerecorded, commercially distributed video and audio tapes, videodiscs, so-called "compact discs" of audio, and so-called "CD ROM" discs of data can also contain unique codes, embedded in the prerecorded programming, that identify the use and usage of said programming.... ...this method enables any subscriber who records the transmission of said programming at a recorder/player, 217, to access the embedded information of said instructions automatically in this fashion whenever the recorded transmission of said programming is played back....
Column 16 lines 49-50.	...(and could also transfer instructions to other external equipment).	Page 476 lines 18-22. Page 473 lines 14-17.	At the station of Figs. 7 and 7F, said message is detected at TV signal decoder, 145, and said execution segment information invokes particular controlled function instructions that cause said message to be transferred.... Fig. 5 shows each decoder as having capacity for transferring monitor information to signal processor, 200, by bus communications means. Said information is received (and processed) at signal processor, 200, by the onboard controller, 14A,
Column 16 lines 51-54.	Signal processor, 130, would probably receive these signals from decoders, 131, 136, 138, 143, 145, 147, 149, and 150) at its buffer/comparator unit, 14 (referring to FIG. 1),...	Page 315 lines 6-10. Page 32 lines 24-33.	(In circumstances where information collecting and processing functions are extensive--for example, when a given buffer/comparator, 14, must collect monitor information at a subscriber station with apparatus and/or communications flows that are extensive and complex--buffer/comparator, 14, may operate under control of a dedicated, so-called "on-board" controller, 14A, at buffer/comparator, 14, which is preprogrammed with appropriate control instructions and is controlled by controller, 20, similarly to the fashion in which controller, 12 is controlled by controller, 20.) ...that the source mark information identifies decoder, 282, rather than decoder, 203.
Column 16 lines 54-56.	...in a predetermined fashion that would permit signal processor, 130, to identify which decoder the individual signals come from...	Page 322 lines 33-35. Page 174 lines 4-17.	Under control of said instructions, said match causes control processor, 391, ... to transfer to said buffer/comparator, 14, header information that identifies a transmission of monitor information then particular decoder-203 information that is the source mark of said decoder, 203,....

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		Page 178 lines 27-35.	Automatically, said instructions cause onboard controller, 14A, to compare the information at said source-mark-@14A memory, in a predetermined fashion, with particular pre-entered source-identification mark information that onboard controller, 14A, retains in memory associated with its pre-entered signal records of monitor information. A match results with that particular decoder-203 source mark information that is associated with the aforementioned record of the prior programming displayed at monitor, 202M. Then said process-monitor-info instructions cause onboard controller, 14A, to initiate a new monitor record that reflects the new "Wall Street Week" programming.
Column 16 lines 56-57.	...and, in a predetermined fashion, create a signal string...	Page 180 lines 1-3.	...creating a meter record that records the decryption.... Automatically, said instructions cause onboard controller, 14A, in a predetermined fashion, to delete ... except the source mark information associated with said record; to record information of said first named instance of "program unit identification code" information (which is the "program unit identification code" of said "Wall Street Week" program to a particular "program unit identification code" location at said record location; to select particular information located at said SPAM-input- signal-@14A register memory and record information at said record location; to select particular preprogrammed record....
Column 16 lines 57-58.	...by appending digital information to the received signal which information might...	Page 297 line 15. Page 180 lines 4-15.	In a predetermined fashion, onboard controller, 14A, also records in a particular monitor record field location at said record location a particular display unit identification code that identifies monitor, 202M, as the display apparatus of said new monitor record. In a predetermined fashion, signal processor, 200, records date and time information received from clock, 18, in first and last particular time field... In the preferred embodiment, to minimize unnecessary duplication, prior to retaining monitor information in signal records, onboard controller, 14A, is preprogrammed to.... Then said process-monitor-info instructions cause onboard controller, 14A, to initiate a new monitor record....
Column 16 lines 59-61.	...identify the individual decoder, 131, 136, 138, 143, 145, 147, 149, or 150 and the time of receipt at signal processor, 130.	Page 181 lines 8-14.	...select particular information located at said SPAM-input-signal-@14A register memory and record information at said record location; to select particular preprogrammed record....
Column 16 lines 61-62.	To minimize the use of data recorder, 16, buffer/comparator, 14,...	Page 323 lines 24-26.	
Column 16 lines 62-64.	...may evaluate signals in a predetermined fashion and discard some signals rather than passing them to the recorder, 16.	Page 180 lines 1-2. Page 180 lines 13-15.	

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			... finally, to discard all unrecorded information of said 1st monitor information (#3)....
Column 16 lines 64-66.	It may compare each signal from a given source such as decoder, 131, with other signals received earlier from the same source.	Page 180 lines 20-21. Page 178 lines 27-35.	Automatically, said instructions cause onboard controller, 14A, to compare the information at said source-mark-@14A memory, in a predetermined fashion, with particular pre-entered source-identification mark information that onboard controller, 14A, retains in memory associated with its pre-entered signal records of monitor information. A match results with that particular decoder-203 source mark information that is associated with the aforementioned record of the prior programming displayed at monitor, 202M. To avoid overloading digital recorder, 16, with duplicate data, buffer/comparator, 14, has means for counting and/or discarding duplicate instances of particular signal information....
Column 16 lines 66-67.	It may only count incoming duplicate signals...	Page 32 lines 9-12.	In a predetermined fashion, signal processor, 200, records date and time information received from clock, 18, in first and last particular time field locations....
Column 16 lines 67 to column 17 line 1.	...or it may append a time code to the end of the basic signal string formed around the first received signal ...	Page 181 lines 12-15.	

XVII. COLUMN 17

Column 17 lines 1-4.	...and alter this time designation each time a new duplicate signal is identified so that the time code identifies the time of receipt of the last duplicate signal.	Page 191 lines 11-21.	...onboard controller, 14A, to locate the instance of "program unit identification code" information at said SPAM-input- signal-@14A register memory, in the fashion described above; to locate the instance of "program unit identification code" information in the aforementioned new monitor record; and to compare said first named instance to said second named instance. A match results. Under control of said process- monitor-info instructions, said match causes onboard controller, 14A, to record date and time information, received from clock, 18, at the aforementioned last particular time field of said new monitor record and, in a
Column 17 lines 4-6.	Whatever method is used, the buffer/comparator, 14, may discard all duplicate signals received.	Page 32 lines 9-12.	To avoid overloading digital recorder, 16, with duplicate data, buffer/comparator, 14, has means for counting and/or discarding duplicate instances of particular signal information ...
Column 17 lines 6-9.	At a time when buffer/comparator, 14, determines in a predetermined fashion that it will receive no further duplicate signals, it transfers the full signal string to recorder, 16.	Page 179 lines 14-24.	Automatically, said process- monitor-info instructions cause onboard controller, 14A, in a predetermined fashion, to locate the instance of "program unit identification code" information in said record of the prior programming

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			displayed at monitor, 202M, and to compare said first named instance of "program unit identification code" information to said second named instance. No match results. Not resulting in a match causes onboard controller, 14A, to cause signal processor, 200, to record said said record of prior programming at recorder, 16.
Column 17 lines 10-12.	Signal divider, 139, illustrates another type of monitoring that signal processing apparatus and methods can facilitate.	Page 315 lines 25-28.	In Fig. 5, decoder, 203, which is part of the signal processor system of the station of Fig. 5, not only monitors the operation of its associated apparatus, microcomputer, 205, but also controls said apparatus,....
Column 17 lines 12-13.	Signal divider, 139, monitors the use of signals rather than the use of programming.	Page 315 lines 25-30.	In Fig. 5, decoder, 203, which is part of the signal processor system of the station of Fig. 5, not only monitors the operation of its associated apparatus, microcomputer, 205, but also controls said apparatus, in the fashions described above, in the execution of SPAM controlled functions.
Column 17 lines 13-16.	Every instruction or information signal transmitted from processor, 140, to microcomputer, 142, is also transmitted to signal processor, 130, ...	Page 315 line 30 to 316 line 6.	Decoder, 203, has means for detecting SPAM information in any programming transmission inputted to its associated apparatus, microcomputer, 205, and not only for detecting and transferring to said onboard controller, 14, via said bus means, the meter-monitor information of every unencrypted SPAM message of said transmissions but also for inputting selected detected information to microcomputer, 205, and for controlling microcomputer, 205, in selected fashions. (Fig. 5 also shows that decoder, 203, has capacity for inputting detected information to signal processor, 200, and for receiving from and transferring control information to signal processor, 200.)
Column 17 lines 16-17.	... to be handled, recorded, and transmitted to a remote site with all other monitor information.	Page 28 lines 25-35	[Signal processor ... 200 in Fig. 7 ... and elsewhere] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring said meter records automatically to one or more remote automated billing stations that account for programming and information consumption and bill subscribers and said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.

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Column 17 lines 17-21.	In a predetermined fashion, signal processor, 130, identifies and marks the source of signals as coming from a device, 139, monitoring signal usage rather than programing usage and viewership.	Page 322 lines 19-26.	For example, in the case of the "Wall Street Week" program, transmitting the first and second SPAM messages of example #3 (which are not encrypted) will cause not only decoder, 203, to process the meter-monitor information of said messages and transmit the aforementioned 1st monitor information (#3) and 2nd monitor information (#3), via the monitor information bus means of Fig. 5, to onboard controller, 14A.
Column 17 lines 21-24.	In this fashion, besides facilitating data gathering on how programing is used, signal processing apparatus and methods also permit the evaluation of how equipment is used.	Page 174 lines 4-23.	Under control of said instructions, said match causes control processor, 39J, ... to transfer to said buffer/comparator, 14, header information that identifies a transmission of monitor information then particular decoder-203 information that is the source mark of said decoder, 203, ... then all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")
Column 17 lines 28-33.	...control information connections between signal processor, 130, and the remote decoders which would permit signal decoder, 130, to alter the methods of operation of said remote decoders. Such control information connections are included in signal processing apparatus and methods.)	Page 312 lines 33-35.	Fig. 5 illustrates means and methods for monitoring receiver station reception and use of programming and modes of receiver station operation and exemplifies one embodiment...
Column 17 lines 34-36.	Methods for Governing or Influencing the Operation of Equipment that is External to Conventional Television and Radio Sets by	Page 318 lines 2-7.	By such bus means, onboard controller, 14A, can cause any on or all of said decoders to commence or cease processing and transmitting SPAM monitor information and can cause any one or all of said decoders to change the location or locations that are searched for SPAM information. Fig. 5 shows that, ...
Column 17 lines 36-38.	Passing Instruction and Information Signals that are Embedded in Television and Radio Programing Transmissions to Such External Equipment	Page 390 line 13.	Automating Ultimate Receiver Stations
Column 17 lines 39-41.	Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programing transmissions,...	Page 390 line 13 to page 556 line 32.	<i>See generally.</i>
		Page 15 lines 16-23.	The frequencies may convey television, radio, or other programming transmissions....The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions and convert the encoded signals to digital information;

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Column 17 lines 42-43.	... identify and discriminate among one or more pieces of external equipment ...	Page 34 lines 24-26.	... identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus...
Column 17 line 43.	... to which such signals are addressed, ...	Page 44 lines 14-15.	A command is an instance of signal information that is addressed to particular subscriber station apparatus....
Column 17 line 44.	... and transfer such signals to such equipment as directed.	Page 95 lines 18-21.	Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... and to transfer said message to ...
Column 17 lines 45-46.	This permits many valuable techniques for facilitating the operation of such external equipment.	Page 390 lines 26-29.	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of ultimate receiver stations in varieties of ways.
Column 17 lines 47-49.	FIG 6 illustrates one possible configuration of equipment in a home or office or other television and/or radio receiving site.	Page 390 lines 30-35.	Fig. 7 exemplifies one embodiment of an ultimate receiver station; is a subscriber station in the field distribution system, 93, of the intermediate transmission station of Fig. 6; and may be a home, an office, a theater, a hotel, or any other station where programming such as television or radio is displayed to persons.
Column 17 lines 49-53.	Consideration of FIGS. 6F and 6G is facilitated by consideration, first, of individual examples of the types of co-ordinated presentations that the signal apparatus and methods described here can permit.	Page 396 lines 8-10.	Features, benefits, and modes of operation of the station of Fig. 7 are demonstrated in the following individual examples.
Column 17 line 54.	Governing the Home or Office Environment	See generally page 396 line 30 to page 406 line 31. (Page 396 line 30 quoted herein.)	Automating U. R. Stations ... Regulating Station Environment
Column 17 lines 55-56.	FIG 6A illustrates a method for governing a home or office environment.	Page 396 lines 31-33.	Fig. 7A illustrates methods for regulating automatically the environment of subscriber stations such as homes and offices.
Column 17 lines 56-62.	One or more channels of television programming transmissions inputted to signal processor, 200, and cable converter box, 201, may contain signals intended for microcomputer, 205, which signals convey information on local weather conditions. Such signals might include current outside temperature and barometric readings. They might include forecast data.	Page 396 line 33 to page 397 line 4.	Particular SPAM regulating messages are embedded in one or more television program channels that are inputted to signal processor, 200, and cable converter box, 201. Said messages include weather bulletin messages that convey local weather information and instructions, including, for example, current outside temperature information, barometric readings, and forecast data.
Column 17 lines 62-64.	Signal processor, 200, is always operating and monitors all incoming channels.	Page 397 lines 17-20.	Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above;....
Column 17 lines 64-65.	It can convey such signals to microcomputer, 205, whenever it receives them.	Page 397 lines 22-26.	... and is preprogrammed at the controller, 39, of its decoder, 30, and at its controller, 12, to transfer to the decoder, 203, of the microcomputer, 205, of its station any detected SPAM message with an instance of particular URS-205 execution

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			segment information...
Column 17 line 65 to Column 18 line 1.	TV signal decoder, 203, can also identify such signals but only in the one TV channel transferred by box, 201, to TV set, 202, and then only when TV set, 202, is on and operating.	Page 401 lines 19-23.	(TV signal decoder, 203, has capacity, itself, to detect said ...SPAM message but only when TV set, 202, is on and operating and when the frequency of said master channel is the one TV channel transferred by box, 201, to TV set, 202.

XVIII. COLUMN 18

Column 18 lines 1-2.	Decoder, 203, transfers all received signals to processor or monitor, 204, ...	Page 400 lines 3-4 Page 35 lines 11-15 Page 35 lines 24-27 Page 35 lines 28-31	Receiving said Weather-Bulletin-125 SPAM message causes decoder, 203, to the overall video transmission and passes said information to a digital detector, 34, which acts to detect the digital signal information embedded in said information, using standard detection techniques well known in the art, and inputs detected signal information to controller, 39, which... ... said audio information that is of interest. The digital detector, 37, detects signal information embedded in said audio information and inputs detected signal information to controller, 39. ... separately defined transmission to a digital detector, 38, which detects signal information embedded in any other information portion of said television channel signal and inputs detected signal information to controller, 39.
Column 18 lines 2-4	... which identifies the signals as addressed to microcomputer, 205, and transfers them to microcomputer, 205.	Page 400 lines 6 - 18 See Fig. 3A regarding the composition of controller 39	Automatically, control processor, 39J, executes particular preprogrammed Weather-Bulletin controlled function instructions that cause said control processor, 39J, to locate the Weather-Bulletin-125 identification information of said message; to determine that said information does not match particular information at particular last-weather-bulletin-identification RAM associated with said control processor, 39J; to input the information of the information segment of said message to the CPU of microcomputer, 205; to retain information of said Weather-Bulletin-125 identification information at said last-weather-bulletin-identification RAM; and to cause said CPU to execute the information so inputted as a machine language job.
		Page 37 line 28 to page	Upon receiving any given instance of signal information,

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38 line 8	controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed ... to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.	contoller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed ... to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
Page 400 lines 19-22.	So executing said information causes microcomputer, 205, to reducing the power usage of said air conditioning system, 207, causes any open windows at said station to be closed.	So executing said information causes microcomputer, 205, to reducing the power usage of said air conditioning system, 207, causes any open windows at said station to be closed.
Page 401 lines 14-17.	In this fashion, SPAM messages can control and regulate the operation of individual subscriber station controlled apparatus (the thermostat control of furnace, 206, for example, could be similarly controlled)	In this fashion, SPAM messages can control and regulate the operation of individual subscriber station controlled apparatus (the thermostat control of furnace, 206, for example, could be similarly controlled)
See generally page 406 line 33 to page 419 line 31. (Page 406 line 33 quoted herein.)	Automating U. R. Stations ... Coordinating a Stereo Simulcast	Automating U. R. Stations ... Coordinating a Stereo Simulcast
Page 406 lines 34-35.	Fig. 7B illustrates automatic control of one kind of combined medium presentation--a stereo simulcast.	Fig. 7B illustrates automatic control of one kind of combined medium presentation--a stereo simulcast.
Page 407 lines 9-11.	At the station of Fig. 7 and 7B, a subscriber decides to watch a particular television program the audio of which is stereo simulcast on a local radio station,	At the station of Fig. 7 and 7B, a subscriber decides to watch a particular television program the audio of which is stereo simulcast on a local radio station,
Page 407 lines 12-15.	Said subscriber switches power on to TV set, 202, and manually selects the proper channel, which is, for example, channel 13, at the television tuner, 215, of said set, 202,	Said subscriber switches power on to TV set, 202, and manually selects the proper channel, which is, for example, channel 13, at the television tuner, 215, of said set, 202,
Page 408 lines 18-29.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of a "01" header, an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, appropriate padding bits, an information segment that contains particular 104.1-MHz information, and an end of file signal.	Periodically thereafter, said program originating studio embeds in said transmission and transmits a particular Tune-Radio-to-FM-104.1 SPAM message that consists of a "01" header, an execution segment of particular activate-simulcast information that is addressed to URS radio decoders, 210, a meter-monitor segment that contains the "program unit identification code" information of said particular television program, appropriate padding bits, an information segment that contains particular 104.1-MHz information, and an end of file signal.

1981 Spec. Reference	1981 Language	1987 Spec. Reference	1987 Language
Specification Correlation Chart			
Column 18 lines 17-19.	Monitor or processor, 204, determines that certain signals are addressed to switch, 212, and transfers these signals to switch, 212.	Page 408 lines 31-34. Page 95 lines 18-24.	Said message is detected at said decoder, 203, and inputted to said controller, 39, Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209. Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... , and to transfer said message to So transferring said message is the controlled function that the information said header and execution segment cause controller, 39, to perform.
Column 18 lines 19-22.	These signals instruct switch, 212, to turn power on to radio, 209, and its associated equipment, including a conventional digital tuner, 213.	Page 410 lines 10-11.	Receiving said SPAM message causes said controller, 44, switch power on to ... radio, 209,....
Column 18 lines 22-24.	Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly.	Page 408 lines 31-34. Page 95 lines 18-24.	Receiving said message causes said controller, 39, to execute particular preprogrammed controlled function instructions that cause said controller, 39, to transfer said message to the radio decoder, 210, of radio, 209. Receiving the header and execution segment of said first message causes controller, 39, to determine that said message is addressed to ... , and to transfer said message to So transferring said message is the controlled function that the information said header and execution segment cause controller, 39, to perform.
Column 18 lines 24-25.	These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.	Page 410 lines 10-11.	Receiving said SPAM message causes said controller, 44, ... to ... tune radio, 209, to the frequency....
Column 18 lines 26-28.	Automatically, by turning TV set, 202, to the channel with a stereo simulcast, the person has activated the stereo simulcast.	Page 411 lines 6-9.	Thus switching power on to TV set, 202, and selecting channel 13 at television tuner, 215, are the only manual steps necessary to actuate the radio simulcast of said channel at radio, 209.
Column 18 lines 29-30.	FIG. 6B also shows signal processor, 200, monitoring for a data gathering and ratings service.	Page 411 lines 10-11 Page 88 lines 19-22.	In addition, because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, monitor information is processed at selected stations for one or more so-called "ratings" agencies (such as the A. C. Nielsen Company) that collect statistics on viewership and programming usage.
Column 18 lines 30-35.	TV signal decoder, 203, and radio signal decoder, 211, also identify certain signals that monitors or processors, 204 and	Page 408 lines 18-29	Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
	<p>210 respectively, determine to identify the programs, etc. on the channels to which TV set, 202, and radio, 209, are tuned,</p>		<p>Specification Correlation Chart</p> <p>consists of ... a meter-monitor segment that contains the "program unit identification code" information of said particular television program, ... Said message is detected at said decoder, 203, and inputted to said controller, 39, in the above described fashion.</p> <p>Periodically thereafter, said program originating studio embeds in said transmission and transmits a ... message that consists of ... a meter-monitor segment that contains secondary "program unit identification code" information of the audio program unit of said radio transmission ... Said message is detected at said decoder, 210, and inputted to said controller, 44.</p> <p>The frequencies may convey television, radio, or other programming transmissions. The input transmissions may be received by means of antennas or from hard-wire connections. The scanners/switches, working in parallel or series or combinations, transfer the transmissions to receiver/decoder/detectors that identify signals encoded in programming transmissions ...</p> <p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p> <p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p>
<p>Column 18 lines 35-36.</p>	<p>The processors, 204 and 210, transfer this information to signal processor, 200, ...</p>	<p>Page 411 lines 10-15.</p>	<p>... because the station of Fig. 7 (and Fig. 7B) is preprogrammed to collect monitor information, receiving said ... message also causes the transmission of monitor information to the onboard controller, 14A, of said signal processor, 200, in the fashion of example #3 above.</p>

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Specification Correlation Chart

			<p>Because the information of said ... message is transmitted periodically in said radio programming transmission, a subsequent instance of said information ... causes the SPAM decoder apparatus ... to transfer to the onboard controller, 14A, of signal processor, 200, ... a particular third transmission of monitor information containing ... "program unit identification code" information of the audio program unit of said radio transmission.</p> <p>Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.</p> <p>Controller, 39, 44, or 47, has capacity for identifying more than one apparatus to which any given signal should be transferred and for transferring said signal to all said apparatus.</p> <p>The station of Fig. 3 is preprogrammed to collect monitor information, ... Under control of said instructions, said match causes control processor, 39J, ... to commence transferring information from control processor, 39J, to buffer/comparator, 14, of signal processor, 200, ... to transfer to said buffer/comparator, 14, ... all of the received binary information of said first message that is recorded at said SPAM-input-signal memory; ... (Said received information is complete information of the first combining synch command, and said information transmitted to buffer/comparator, 14, is called, hereinafter, the "1st monitor information (#3).")</p>
		<p>Page 418 line 23 to page 419 line 31</p> <p>Page 36 lines 32-33.</p> <p>Page 38 lines 11-14.</p> <p>Page 173 line 30 to page 174 line 23.</p>	
	... for recording and subsequent transmission to a remote data collection site.		<p>In the fashion of example #3 above, receiving said first transmission of monitor information causes said onboard controller, 14A, to cause a signal record of prior programming of TV set, 202, to be recorded at the recorder, 16, of signal processor, 200, (and may cause records to be transferred to a remote location) and causes said onboard controller, 14A, to initiate a first signal record, ... that is based on the "program unit identification code" information of said particular television program in</p>
Column 18 lines 36-37.		Page 419 lines 4-15.	<p>In the fashion described above, receiving said third transmission of monitor information ... causes said onboard controller, 14A, to initiate a third signal record, ... that is</p>

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			based on the aforementioned secondary "program unit identification code" information of the audio program unit of said radio transmission.
		Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
Column 18 lines 38-41.	Simultaneously, processor, 200, is also monitoring sequentially all other broadcast transmissions in the locality to gather further data on programming availability to record and transmit to a remote site.	Page 28 lines 25-35.	[Signal processor 200 in Fig. 7] has capacity, at each station, for receiving monitor information that identifies what programming is available, what programming is used, and how said programming is used and capacity for assembling and retaining monitor records that document said availability and usage. It has capacity for transferring ... said monitor records automatically to one or more remote so-called "ratings" stations that collect statistical data on programming availability and usage.
		Page 397 lines 17-20.	Each subscriber station signal processor, 200, operates continuously; scans all incoming channels sequentially at its switch, 1, and mixer, 3, as described in example #5 above; is preprogrammed at its controller, 20, to ...
Column 18 line 42.	Receiving Selected Information and/or Programming.	See generally page 419 line 33 to page 447 line 23. (Page 419 line 33 quoted herein.)	Automating U. R. Stations ... Receiving Selected Programming
Column 18 lines 43-45.	Figure 6C illustrates methods for monitoring multiple programming channels and selecting programming and information in a predetermined fashion.	Page 419 line 34 to Page 420 line 2.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information.
Column 18 lines 45-47.	In this example, microprocessor, 205, is programmed to hold a portfolio of stocks...	Page 420 lines 3-4.	The microprocessor, 205, of the station of Fig. 7 and 7C, is preprogrammed to hold records of a portfolio of stocks...
Column 18 lines 47-48.	...and to receive news about these particular stocks and about the industries they are in.	Page 420 lines 5-6.	...and to receive and process automatically news items about said stocks and about the industries of said stocks.
Column 18 lines 48-51.	Several separate news services transmit news on different channels carried on the multi-channel cable transmission to	Page 420 lines 21-29.	Two remote stations--remote news-service-A station and remote news-service-B station--transmit, from

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Column 18 lines 58-59.	Signal processor, 200, scans sequentially all channels.	Page 422 lines 23-25.	At the station of Fig. 7 and 7C, signal processor, 200, scans sequentially all channels at its switch, 1, mixer, 3, and decoder, 30, in the fashion of example #5.
Column 18 lines 59-62.	When it identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205.	Page 422 line 33 to Page 423 line 10.	...cause said controller, 39, to load the binary information of "T" ... of said message at particular working register memory and determine that the information at said memory matches the aforementioned binary information of "T" that is among the news-items-of-interest information ... Determining a match causes said controller, 39, to transmit said message, with channel mark information that identifies the particular channel in which said message was embedded, to said controller, 20, via control information transmission means and to continue functioning in the fashion of example #5.
Column 18 lines 62-65.	In a predetermined fashion, either microcomputer, 205, or signal processor, 200, instructs tuner, 223, to set cable converter box, 222, to the proper channel,...	Page 423 lines 11-13. Page 424 lines 2-9.	Receiving said message causes said controller, 20, to cause a selected cable converter box, 222, to receive the transmission identified by said channel mark; Then receiving a particular to-223 instruction from said control processor, 20A, causes controller, 20, to transmit particular instructions, via said control information transmission link, to said tuner, 223, thereby causing said tuner, 223, to tune its associated cable converter box, 222, to the particular channel transmission of said multi-channel cable transmission that is identified by said channel mark.
Column 18 lines 65-67.	...and microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing	Page 426 lines 10-18.	Then automatically, microcomputer, 205, transfers said data to said printer, 221. In so doing, microcomputer, 205, causes printer, 221, in a predetermined fashion, to print said AT&T news item. (Said preprogrammed instructions entered by the subscriber might cause said microcomputer, for example, then to establish a programming communication link with computer memory unit, 256, and to cause said unit, 256, to record said AT&T news item.)

XIX. COLUMN 19

Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to	Page 419 line 34 to page 420 line 2.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected
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	play or record.		Page 11 lines 5-10.	programming and information.
Column 19 lines 5-8.	In another example, microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast.		Page 428 lines 21-26.	The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming. The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.
Column 19 lines 8-9.	Microcomputer, 205, is preinformed of the time of cablecasting.		Page 437 lines 1-3.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8:30 information to the controller, 20.
Column 19 lines 9-12.	When that time comes, microcomputer, 205, receives no program identification signals whatever from TV signal decoder, 203, which indicates that the set, 202, is not on.		Page 444 lines 33-34.	...decoder, 145, to determine, in a predetermined fashion, that power is not on to monitor, 202M, and to respond by....
Column 19 lines 12-13.	Microcomputer, 205, instructs signal processor, 200, to...		Page 288 lines 13-20.	As Fig. 4 shows, ...in the preferred embodiment, microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.
Column 19 lines 14-15.	...pass all program and channel identifiers on all programming being cablecast on the multi-channel system.		Page 445 lines 8-10.	... cause microcomputer, 205, to input particular preprogrammed instructions to said controller, 20, ...
			Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C....
			Page 248 lines 22-26.	Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.
			Page 250 lines 13-16.	Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week"

Specification Correlation Chart

			<p>program ...</p> <p>Then, in a predetermined fashion, control processor, 391, determines that said first command contains subject matter meter-monitor information causing said control processor, 391, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter- monitor segment information as new following said execution segment information on the channel of the programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>...microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the</p>
		Page 252 lines 15-35.	
			Page 267 lines 20-28.
Column 19 lines 15-18.	Signal processor, 200, receives this instruction from microcomputer, 205, at its processor or monitor, 12, which reacts,...	Page 288 lines 16-20.	
Column 19 lines 18-20.	...in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/comparator, 14.	Page 435 lines 16-18.	
		Page 267 lines 20-28.	

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		Page 435 lines 16-25.	<p>1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p>
Column 19 lines 20-23.	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.	Page 267 lines 20-28.	<p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the</p> <p>1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.)</p> <p>By contrast, the...</p>
		Page 435 lines 16-25.	<p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C detects one instance of the Select-WSW-Program-Unit SPAM message of the station of Fig. 6 ...</p> <p>Receiving said Select-WSW-Program-Unit message causes the apparatus of said signal processor, 200, to input said message to the microcomputer, 205, of said station.</p>
		Page 436 line 9 to page 437 line 3.	<p>Receiving said Select-WSW-Program-Unit message causes decoder, 203, ... to input ... the information segment of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that</p>

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Specification Correlation Chart

			<p>contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted</i>. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>...to receive the transmission of cable channel 13;....</p>
Column 19 lines 23-24.	Then, in a predetermined fashion, microcomputer, 205, may...	<p>Page 439 lines 14-15.</p> <p>Page 437 lines 1-6.</p>	<p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;....</p>
Column 19 lines 24-25.	...instruct tuner, 214, to switch box, 201, to channel X...	<p>Page 295 lines 6-8.</p> <p>Page 439 lines 9-15.</p>	<p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;....</p>
Column 19 lines 25-27.	...and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...	<p>Page 445 lines 24-27.</p> <p>Page 446 lines 18-23.</p>	<p>...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,....</p> <p>...controller, 20, ... causes recorder/player, 217, to record</p>

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
Specification Correlation Chart			
Column 19 lines 27-28.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on	Page 445 line 24 to page 446 line 1.	said information of the "Wall Street Week" program. ...instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M,.... ...and to tune monitor, 202M, in a predetermined fashion.
Column 19 lines 28-29.	and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 35 to page 446 line 1. Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio....
Column 19 line 30.	Co-ordinating Multimedia Presentations in Time	See generally page 447 line 25 to page 457 line 10. Page 18 lines 24-27.	Controlling Computer-based Combined Media Operations Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations. (To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.) Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed. But the combining of Fig. 1C is just part of a larger process. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
Column 19 lines 31-34.	FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	page 450 line 27 to page 451 line 11.	

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
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Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	Each weekday after 4:30 PM, a remote stock-price-data transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)
Column 19 lines 37-39.	It may receive these directly or it may automatically query a data service for them in a predetermined fashion.	Page 449 lines 26-35.	Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.
Column 19 lines 39-41.	It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
Column 19 lines 42-43.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to...	Page 450 lines 31-32.	...caused his microcomputer, 205, to be preprogrammed as described above;...
Column 19 lines 43-44.	...instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 20-23.	Microcomputer, 205, is preprogrammed to ... respond ... to ...
Column 19 lines 45-46.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening,...	Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.
Column 19 lines 46-48.	...several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
		Page 23 line 35 to page 24 line 4.	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said

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			second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series.
		Page 37 line 26 to page 38 line 8	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
Column 19 lines 48-53.	These signals instruct microcomputer, 205, to generate several graphic video overlays, which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to transmit these overlays to TV set, 202,...	Page 24 lines 5-16.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."
		Page 451 lines 7-11.	...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.
Column 19 line 53.	...upon command.	Page 26 lines 20-28.	(Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the Dow Jones Industrials did is the past week," and a studio generated graphic is pictured.	Page 25 lines 26-33.	During this time the program may show the so-called "talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
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Column 19 lines 56-59.	The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.	Page 451 lines 25-32.	generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M. For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index. Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated at said program originating studio,...
Column 19 lines 59-60. Column 19 lines 60-62.	Then the host says, "And here is what your portfolio did." At this point, an instruction signal is generated in the television studio originating the programing ...	Page 25 lines 33-34. Page 25 line 34-36.	... embedded in the programming transmission, and transmitted. Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...
Column 19 lines 62-63	... and is transmitted in the programing transmission.	Page 25 line 35 to page 26 line 1. Page 26 lines 1-2.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 37 line 26 to page 38 line 8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M. And the Fig. 1C combining is displayed.
Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 26 lines 1-8.	TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaid on the studio generated graphic.
Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	

1981 Spec. Reference	1981 Language	1987 Spec Reference	1987 Language
XX. COLUMN 20			
Column 19 lines 1-4.	In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programming of interest to play or record.	Page 419 line 34 to page 420 line 2. Page 11 lines 5-10.	Fig. 7C illustrates methods for monitoring multiple programming channels, selecting programming and information of interest, and receiving said selected programming and information. The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming. The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted.
Column 19 lines 5-8.	In another example, microcomputer, 205 may be preinformed that a certain television program, hypothetically "Wall Street Week," should be televised on TV set, 202, when it is cablecast.	Page 428 lines 21-26.	Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular-8-30 information to the controller, 20. ...decoder, 145, to determine, in a predetermined fashion, that power is not on to monitor, 202M, and to respond by....
Column 19 lines 8-9.	Microcomputer, 205, is preinformed of the time of cablecasting.	Page 437 lines 1-3.	As Fig. 4 shows, ...in the preferred embodiment, microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.
Column 19 lines 9-12.	When that time comes, microcomputer, 205, receives no program identification signals whatever from TV signal decoder, 203, which indicates that the set, 202, is not on.	Page 444 lines 33-34.	... cause microcomputer, 205, to input particular preprogrammed instructions to said controller, 20, ...
Column 19 lines 12-13.	Microcomputer, 205, instructs signal processor, 200, to...	Page 288 lines 13-20.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal processor, 200, of the station of Fig. 7 and 7C....
Column 19 lines 14-15.	... pass all program and channel identifiers on all programming being cablecast on the multi-channel system.	Page 445 lines 8-10. Page 435 lines 16-18. Page 248 lines 22-26.	Via a conventional multi-channel cable transmission, in a fashion well known in the art, four channels of conventional television programming and two conventional FM radio signals are inputted to a first alternate contact of switch, 1, and to mixer, 2.

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		<p>Page 250 lines 13-16.</p> <p>Page 252 lines 15-35.</p> <p>Page 267 lines 20-28.</p>	<p>Example #5 begins with the embedding and transmitting, at the remote station that originates the "Wall Street Week" broadcast, of the first message of the "Wall Street Week" program ...</p> <p>Then, in a predetermined fashion, control processor, 39J, determines that said first command contains subject matter meter-monitor information causing said control processor, 39J, to transmit a message that consists of ... execution segment information that is addressed to microcomputer, 205, (and that causes microcomputer, 205, to process the information of the meter-monitor segment immediately following said execution segment information as new programming now being transmitted on the channel of the channel mark of said meter-monitor segment) then meter-monitor segment information that includes the "program unit identification code" and subject matter information of said first command and the channel mark of cable channel 13 ... (Said message whose transmission is caused by receiving said first command enables microcomputer, 205, in a fashion described more fully below, to tune automatically to receive the program that said "program unit identification code" identifies if said program is of interest, ...</p> <p>All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program-message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) ... microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.</p> <p>In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal</p>
Column 19 lines 15-18.	Signal processor, 200, receives this instruction from microcomputer, 205, at its processor or monitor, 12, which reacts,...	Page 288 lines 16-20.	... microcomputer, 205, may also automatically substitute for local control, 225, in predetermined fashions in inputting control information to said controller, 20, on the basis of preprogrammed instructions and information previously inputted to said microcomputer, 205.
Column 19 lines 18-20.	...in a predetermined fashion by passing also externally to microcomputer, 205, all signals that it passes to buffer/	Page 435 lines 16-18.	In due course, while scanning sequentially all channels in the fashion of example #5, the apparatus of the signal

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			<p>of said message to the CPU of microcomputer, 205, and to cause said CPU to execute the information so inputted as a machine language job. The information so inputted is the aforementioned determine-whether-to-select instructions that contain said particular specific-WSW information and said please-fully-enable-WSW-on-CC13-at-particular-8:30 information.</p> <p>Executing said determine-whether-to-select instructions causes microcomputer, 205, to... Said instructions contain one instance, and ... program-unit-of-interest information that is preprogrammed at said microcomputer, 205, contains a second instance of specific-WSW information, <i>which second instance reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. Automatically, microcomputer, 205, compares said one instance to said program-unit-of-interest information and determines a match with said second instance.</i></p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p>
Column 19 lines 23-24.	Then, in a predetermined fashion, microcomputer, 205, may...	Page 439 lines 14-15. Page 437 lines 1-6.	<p>...to receive the transmission of cable channel 13;...</p> <p>Determining a match causes microcomputer, 205, automatically to input said please-fully-enable-WSW-on-CC13-at-particular- 8:30 information to the controller, 20.</p> <p>Receiving said please-fully-enable-WSW-on-CC13-at-particular-8:30 information causes controller, 20, in a predetermined fashion, to prepare particular apparatus ...</p> <p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;....</p>
		Page 439 lines 9-15.	<p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;....</p>
Column 19 lines 24-25.	...instruct tuner, 214, to switch box, 201, to channel X...	Page 295 lines 6-8.	<p>Then, automatically, controller, 20, causes a selected tuner, 214, to tune to the frequency of cable channel 13, thereby causing its associated converter box, 201, to convert its...</p>
		Page 439 lines 9-15.	<p>...to cause selected apparatus of said station--cable converter box, 201, ... to receive the transmission of cable channel 13;....</p>

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Column 19 lines 25-27.	...and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," ...	Page 445 lines 24-27.	...instructions causes controller, 20, ...; to switch power on to video recorder/player, 217,....
Column 19 lines 27-28.	...and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on	Page 446 lines 18-23.	...controller, 20, ... causes recorder/player, 217, to record said information of the "Wall Street Week" program.
Column 19 lines 28-29.	and tuner, 215, to tune appropriately to "Wall Street Week."	Page 445 line 24 to page 446 line 1.	...instructions causes controller, 20, to switch power on to monitor, 202M, ... Automatically, controller, 20, inputs a particular instruction to decoder, 145, via said communications link, that causes decoder, 145, to switch power on to monitor, 202M,....
Column 19 line 30.	Co-ordinating Multimedia Presentations in Time	Page 445 line 35 to page 446 line 1.	...and to tune monitor, 202M, in a predetermined fashion.
Column 19 lines 31-34.	FIG 6C can also illustrate how programming delivered at different times to one place can be co-ordinated to give a multimedia presentation at one time in one place.	Page 446 lines 17-21.	In so doing, controller, 20, causes monitor, 202M, to receive the decrypted video and audio information of the "Wall Street Week" program, to display the video image of said information, and to emit sound in accordance with said audio.....
		See generally page 447 line 25 to page 457 line 10.	Controlling Computer-based Combined Media Operations
		Page 18 lines 24-27.	Fig. 7C is a block diagram of signal processing apparatus and methods selecting receivable information and programming and controlling combined medium, multi-channel presentations.
		page 450 line 27 to page 451 line 11.	(To accomplish all this has required only that the subscriber of microcomputer, 205, [and other subscribers at other stations] cause the installation and connection of the apparatus shown in the figures of this submission, especially Fig. 7 (and 7C); caused his microcomputer, 205, to be preprogrammed as described above; and preinformed microcomputer, 205, of his wish to view said "Wall Street Week" program by causing the aforementioned select-WSW information to be recorded at said microcomputer, 205.) Then the combined medium combining process described above in "One Combined Medium" and in examples #1, #2, #3, #4, etc. commences. And the Fig. 1C combining is displayed. But the combining of Fig. 1C is just part of a larger process. When the "Wall Street Week" transmission begins at 8:30

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Column 19 lines 35-37.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day.	Page 449 lines 13-26.	<p>PM on a Friday evening, the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first.</p> <p>Each weekday after 4:30 PM, a remote stock-price-data transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer. (Said remote station transmits said closing stock price data and causes specific subscriber stations to select and process their specific information of interest in the fashion in which remote news-service-A station transmitted the AT&T news item and caused selected stations to select and process, in their specific fashions, the information of said item.)</p>
Column 19 lines 37-39.	It may receive these directly or it may automatically query a data service for them in a predetermined fashion.	Page 449 lines 26-35.	<p>Alternatively, microcomputer, 205, is caused in a predetermined fashion (for example, by a SPAM message a given transmission monitored by signal processor, 200, in any of the above described fashions) automatically to telephone a remote data service computer, by means of network, 262, in a fashion well known in the art, and to cause said remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio of said microcomputer, 205, thereby causing said microcomputer, 205, to record said datum or data in a predetermined fashion.</p>
Column 19 lines 39-41.	It records those prices that relate to the stocks in its stored portfolio.	Page 449 lines 13-20.	Each weekday after 4:30 PM, a remote stock-price-data transmission station transmits all closing stock price data applicable that day and causes apparatus at each subscriber station, in a predetermined fashion, to select and record at the microcomputer, 205, of said station the particular closing price datum or data that apply to the particular stock or stocks of the preprogrammed portfolio of said computer.
Column 19 lines 42-43.	Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to...	Page 450 lines 31-32.	...caused his microcomputer, 205, to be preprogrammed as described above;...
Column 19 lines 43-44.	...instruction signals embedded in the "Wall Street Week" programming transmission.	Page 21 lines 20-23.	Microcomputer, 205, is preprogrammed to ... respond ... to ...
		Page 21 lines 23-24.	... instruction signals embedded in the "Wall Street Week" programming transmission.

1981:Spec Reference	1981:Language	1987:Spec:Reference	1987:Language
Column 19 lines 45-46.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening,...	Page 451 lines 6-7.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, ...
Column 19 lines 46-48.	...several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.	Page 23 line 35 to page 24 line 4. Page 37 line 26 to page 38 line 8	Subsequently, a second series of instructions is embedded and transmitted at said program originating studio. Said second series is detected and converted into usable digital signals by decoder, 203, and inputted to microcomputer, 205, in the same fashion as the first series. In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
Column 19 lines 48-53.	These signals instruct microcomputer, 205, to generate several graphic video overlays, which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to transmit these overlays to TV set, 202,...	Page 24 lines 5-16.	Microcomputer, 205, evaluates the initial signal word or words which instruct it to load at RAM (from the input buffer to which decoder, 203, inputs) and run the information of a particular set of instructions that follows said word or words just as the information of a file named FILE.EXE, recorded on the contained floppy disk, would be loaded at RAM (from the input buffer to which the disk drive of said disk inputs) and run were the command "FILE" entered from the console keyboard to the system level of the installed disk operating system. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set."
Column 19 line 53.	...upon command.	Page 451 lines 7-11. Page 26 lines 20-28.	...the program instruction set in the first message of the "Wall Street Week" example instructs microcomputer, 205, to generate not one but a plurality overlays. The combining of Fig. 1C is merely the first. (Hereinafter, an instruction such as the above signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)
Column 19 line 53-56.	Subsequently in the program, the host says, "Here is what the	Page 25 lines 26-33.	During this time the program may show the so-called

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	Dow Jones Industrials did is the past week, " and a studio generated graphic is pictured.		"talking head" of the host as he describes the behavior of the stock market over the course of the week. Then the host says, "Now as we turn to the graphs, here is what the Dow Jones Industrials did in the week just past," and a studio generated graphic is transmitted. Fig. 1B shows the image of said graphic as it appears on the video screen of TV monitor, 202M.
Column 19 lines 56-59.	The host then says, "Here is what the broader NASDAQ index did in the week past," and a studio generated graphic overlay is displayed on top of the first graphic.	Page 451 lines 25-32.	For example, the Fig. 1C display of user specific overall stock portfolio performance could be followed by second and third displays that analyze portions of the subscriber's portfolio—eg., the portion invested in New York Stock Exchange listed stocks in comparison to the so-called "NYSE" index and the portion invested in so-called "over-the-counter" stocks in comparison to the so-called "NASDAQ" index.
Column 19 lines 59-60.	Then the host says, "And here is what your portfolio did."	Page 25 lines 33-34.	Then the host says, "And here is what your portfolio did."
Column 19 lines 60-62.	At this point, an instruction signal is generated in the television studio originating the programming ...	Page 25 line 34-36.	At this point, an instruction signal is generated at said program originating studio.....
Column 19 lines 62-63	... and is transmitted in the programming transmission.	Page 25 line 35 to page 26 line 1.	... embedded in the programming transmission, and transmitted.
Column 19 lines 63-64.	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.	Page 26 lines 1-2.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and ...
		Page 37 line 26 to page 38 line 8.	In each decoder, the controller, 39, 44, or 47, receives detected digital information from the relevant detector or detectors, 34, 37, 38, 43, and 46. Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed ... to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
Column 19 lines 64-66.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202,...	Page 26 lines 1-8.	Said signal is identified by decoder, 203; transferred to microcomputer, 205; and executed by microcomputer, 205, at the system level as the statement, "GRAPHICS ON". Said signal instructs microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
Column 19 lines 67 to column 20 line 2.	The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.	Page 451 line 3. Page 26 lines 8-11.	And the Fig. 1C combining is displayed. TV monitor, 202M, then displays the image shown in Fig. 1C which is the microcomputer generated graphic of the

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			subscriber's own portfolio performance overlaid on the studio generated graphic.
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XXI. COLUMN 21

Column 21 lines 1-2.	Using Signaling and Decryption Techniques to Control Distribution of Copyrighted Materials	<p>See generally page 278 line 22 to page 312 line 30. Especially, page 312 lines 12-28.</p> <p>See generally page 427 line 8 to page 447 line 23.</p> <p>See generally page 533 line 23 to page 556 line 32. Especially, page 548 line 1 to page 549 lines 31.</p>	Regulating the Reception and Use of Programming
Column 21 lines 3-8.	FIG 6E illustrates a signaling and decryption technique which could serve to facilitate the electronic distribution of copyrighted materials such as books and movies by tending to discourage piracy and the unauthorized retransmission of copies, whether they be properly acquired or pirated.	<p>Generally, page 312 lines 12-20.</p> <p>Page 306 lines 20-25.</p>	<p>And for example, the transmitted programming may be only audio (for example, of a radio transmission) or print (for example, of broadcast print) rather than television. And for example, the output apparatus may be speakers or one or more printers rather than a television monitor. And for example, rather than being a transmitter at a remote wireless or cable transmission station, the source of the transmission may be a local apparatus such as a video (or audio or digital information) tape recorder or a laser disc player,</p> <p>(By causing information that identifies the station at which encrypted information is decrypted to be so inserted, the present invention makes it possible to identify particular stations where their information is misused--for example, if pirated decrypted copies of information are distributed, the station at which decryption occurred can be identified....</p> <p>...Each farmer's laser disc player, 232, is loaded with a so-call "optical disk" on which is recorded a file named "PROPRIET.MOD" that contains encrypted information of a proprietary software module.</p>
Column 21 lines 9-19.	FIG 6E could be any home or commercial establishment but is described here as a book store. Using conventional laser videodisc equipment and techniques, well known in the art, a publisher has put his full line of books on laser discs in encrypted form and distributed one copy of each disc to each of his authorized book store retail outlets. He has also	<p>Page 534 lines 13-16.</p> <p>Page 548 lines 24-30.</p>	Automatically, under control of its specific received program

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	distributed to each a conventional computer floppy disk for use on conventional microcomputer, 205, that can operate conventional laser videodisc system, 232, in a predetermined fashion to locate and transmit individual titles in his line.		instruction set, each microcomputer, 205, accesses the file, MY_FARM.DAT, that is prerecorded on the disk loaded at its A: disk drive and also accesses the encrypted "PROPRIET.MOD" file that is prerecorded at the laser disc player, 232, of each farmer's station....
Column 21 lines 20-24.	A customer comes into the book store and asks to buy a title, hypothetically, <i>How to Grow Grass</i> . The salesman asks the customer for suitable identification, types into micro-computer, 205, the customer's name and address and that he wishes to purchase <i>How to Grow Grass</i> .	Page 548 lines 1-4.	Receiving the particular first SPAM message of its local intermediate station causes apparatus of the subscriber station of each farmer to execute the contained program instruction set of said message at the microcomputer, 205,....
Column 21 lines 25-26.	Microcomputer, 205, may check to determine that the customer has no record as a pirate...	Page 549 line 19-21 Page 16 lines 24-26. Page 293 lines 24-35.	Then, in the fashion of example #7, apparatus of each station are caused to decrypt and retain meter information of the decryption of the encrypted information of said file. Flexibility must exist for varying techniques that restrict programming to duly authorized subscribers in order to identify and deter pirates.... A match indicates that said sixteen contiguous bit locations that hold preprogrammed SPAM operating information are preprogrammed with properly. A match occurs at the station of Fig 4. (Simultaneously other stations compare information of other selected information of bit locations that contain information of said enable-CC13 instructions with information of other local bit locations that hold preprogrammed SPAM operating information. At each station where a match fails to occur--which suggests that the preprogrammed SPAM operating information of said station has been tampered with in an unauthorized fashion--.... ...each microcomputer, 205, accesses the file, MY_FARM.DAT, that is prerecorded on the disk loaded at its A: disk drive and also accesses the encrypted "PROPRIET.MOD" file that is prerecorded at the laser disc player, 232, of each farmer's station....
Column 21 lines 26-30.	...then transfers his name and address to buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, and instructs laser videodisc system, 232, to transmit its encrypted copy of <i>How to Grow Grass</i> to printer or other means, 221,...	Page 548 lines 25-30.	Then, in the fashion of example #7, apparatus of each station are caused to decrypt and retain meter information of the decryption of the encrypted information of said file.
Column 21 lines 30-32.	... via decryptors, 224 and 231. Laser system, 232, transmits one copy of the encrypted title to decryptor, 224, ...	Page 549 line 19-21. Page 299 lines 19-22.	Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to

Specification Correlation Chart

Column 21 lines 32-34	...and one to signal processor, 200, for processing and evaluation.	Page 297 lines 20-33.	<p>decryptor, 224, thereby causing said decryptor, 224,....</p> <p>Subsequently, but still in the interval between said commence-enabling time and said 8:30 PM time, said program originating studio embeds in the audio portion and transmits a particular SPAM message that consists of a "01" header, execution segment information that matches said enable-WSW- programming information, particular meter-monitor information, particular</p> <p>1st-stage-enable-WSW-program instructions as the information segment information, and an end of file signal. (Hereinafter said message is called the "1st-WSW-program-enabling-message (#7).")</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at the digital detector, 38, of decoder, 30, to detect the information of said message and at the control processor, 39J,....</p> <p>In the fashions described above, so transmitting said SPAM message causes signal processor, 200, at the digital detector, 38, of decoder, 30, to detect the information of said message and at the control processor, 39J, to select the information of the execution segment in said message and determine that said selected information matches the aforementioned instance of enable-WSW-programming information at said particular controlled-function-invoking information location. So determining a match causes said control processor, 39J, to execute the aforementioned transfer-this- message-to-controller-20 instructions.</p> <p>Each farmer has a subscriber station that is identical to the station of Fig. 7 except that each station has two television recorder/players that are recorder/players, 217 and 217A; two television tuners, 215 and 215A; and a laser disk player, 232. Particular farm information of the specific farm of each farmer is recorded in a file named MY_FARM.DAT on a disk at the A: disk drive of the microcomputer, 205, of each station.</p>
Column 21 lines 35-36.	In the encrypted title, signal processor, 200, identifies one or more signal words.	Page 297 line 30 to page 298 line 5.	<p>Receiving the "1st-WSW-program-enabling-message (#7) causes controller, 20, to execute the aforementioned load-and-run-@20 instructions, to load the</p> <p>1st-stage-enable-WSW- program instructions of the information segment at particular RAM of controller, 20, then to execute the information so loaded as the so-called machine language instructions of one so-called job.</p>
Column 21 lines 36-38.	If signal processor, 200, has the customer's name and address and the bookstore is a retail outlet in good standing...	Page 534 lines 1-8.	
Column 21 lines 38-40.	...that has received from a remote site program information on the predetermined fashions in affect,...	Page 298 lines 10-21.	

Specification Correlation Chart

			Executing said 1st-stage-enable-WSW-program instructions causes controller, 20, in the predetermined fashion of said instructions, to affect a first stage of decrypting the video information of the "Wall Street Week" program transmission.
Column 21 lines 40-43.	...signal processor, 200, decrypts the signal word or words and transfers them to decryptor, 224, to serve as the code for the first stage of decryption.		Automatically, controller, 20, transfers said decryption cipher key Ba information to a selected decryptor, 224, and causes decryptor, 224, to commence decrypting any received information, using said key information and selected decryption cipher algorithm B, and outputting decrypted information to matrix switch, 258. Automatically, controller, 20, causes matrix switch, 258, to transfer the information of the aforementioned video output inputted from said tuner, 215, to the output that outputs to decryptor, 224,...
Column 21 lines 44-45.	Decryptor, 224, then decrypts a part of the encrypted transmission...	Page 299 lines 22-27.	...thereby causing said decryptor, 224, to receive the information of said video portion (said information being, as explained above, encrypted digital video), to decrypt said information, and to transfer decrypted information of said video portion to matrix switch, 258.
Column 21 lines 45-46.	...and passes the partly decrypted transmission to signal stripper, 229, and signal generator, 230.	Page 305 lines 22-32.	...to commence transferring the information inputted from said converter box, 201, to the output that outputs to television tuner, 215; to commence transferring the information inputted from decryptor, 224, to the output that outputs to signal stripper, 229; to commence transferring the information inputted from signal stripper, 229, to the output that outputs to signal generator, 230; to commence transferring the information inputted from signal generator, 230, to the output that outputs to decryptor, 231; and to commence transferring the information inputted from decryptor, 231....
Column 21 lines 46-51.	In the decrypted portion of the partially decrypted transmission, signal processor, 200, identifies a second signal word or set of words which it decrypts in a predetermined fashion and passes to decryptor, 231, to serve as the code basis for the second stage of decryption.	Page 304 lines 10-11. Page 304 line 23 to page 307 line 8.	(Hereinafter, each of said SPAM messages is called a "2nd-WSW-program-enabling-message (#7).") Automatically, decryptor, 39K, decrypts the encrypted information of said message and transfers said message to EOFS valve, 39H. Automatically, EOFS valve, 39H, inputs the information of said message, unencrypted, to control processor, 39J, until the end of file signal of said message is detected. Automatically, control processor, 39J, determines that the unencrypted information of the execution segment of said message matches the aforementioned instance of enable-WSW-programming information at said particular

Specification Correlation Chart

			controlled-function-invoking information location and executes the aforementioned transfer-this-message-to-controller-20 instructions. Executing said instructions causes the transfer of the remove.) Automatically, controller, 20, selects information of the aforementioned first three of the last four significant digits of the binary information of the aforementioned unique digital code at ROM, 21 and computes a particular Q quantity according to a particular formula that is preprogrammed in said 2nd-stage-enable-WSW-program instructions. ... The information of said Q quantity is the decryption key Aa.
Column 21 lines 51-53.	Signal processor, 200, also may instruct signal stripper, 229, to remove this second signal word or words.	Page 305 line 34 to page 306 line 4.	Automatically, controller, 20, causes signal stripper, 229, to strip information, in a fashion well known in the art, from a particular strip-designated portion of the video transmission received at said stripper, 229, and transfer the received video, without said stripped information, to matrix switch, 258.
Column 21 lines 53-63.	Signal processor, 200, also passes the customer's name and address and its own unique apparatus identifier code from read only memory, 21, to signal generator, 230, which generates a signal embedding the customer's name and address and the retail outlet's identification in the programming in a suitable place or places in a suitable fashion. (Signal processor, 200, may also transmit the customer's name and address to printer or other means, 221, for actual printing of the customer's name and address in the text.) The transmission then passes through decryptor, 231, which completes the decryption process...	Page 306 lines 11-19.	Automatically, controller, 20, selects complete information of the aforementioned unique digital code at ROM, 21, transmits said complete information to signal generator, 230, and causes said generator, 230, to insert said complete information, in a predetermined periodic fashion and in an inserting fashion well known in the art, into a particular insertion-designated portion of the video transmission received at said generator, 230, and to transfer the received video, with said inserted information, to matrix switch, 258.
Column 21 lines 63-65.		Page 305 lines 29-31, and lines 14-16.	...to commence transferring the information inputted from signal generator, 230, to the output that outputs to decryptor, 231;... ...and to affect a second and last stage of decrypting the digital video information of the "Wall Street Week" program transmission.
Column 21 lines 65-66.	...and passes the decrypted programming transmission to printer or other means, 221,...	Page 309 line 27 to page 310 line 3.	Determining that signal stripper, 229, and that signal generator, 230, are stripping and inserting correctly (after having determined that that decryptors, 224 and 231, are decrypting correctly) causes the controller, 20, of the station of Fig. 4 (and causes controllers, 20, at other stations where so determining occurs) to execute particular additional 2nd-stage-enable-WSW-program instructions, and executing said instructions causes controller, 20, to cause the apparatus of the station of Fig. 4 to commence transferring the

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
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Specification Correlation Chart

			decrypted ... information ... to microcomputer, 205, ... And for example, the transmitted programming may be only audio (for example, of a radio transmission) or print (for example, of broadcast print) rather than television.
Column 21 lines 66-67.	...and also to signal processor, 200.	Page 312 lines 12-14.	...and to commence transferring the information inputted from decryptor, 231, to the output that outputs to said third alternate contact of switch, 1.
Column 21 line 67 to column 22 line 2.	Signal processor, 200, receives and analyzes the signal content of the programming output of decryptor, 231 to ensure that stripper, 229, and and generator, 230, have functioned properly.	Page 305 lines 31-34. Page 308 lines 13-30.	Receiving said signal causes controller, 20, under control of said 2nd-stage-enable-WSW-program instructions, to cause said control processor, 391, to transfer to controller, 20, selected information of said check sequence; to compare said selected information to selected information of said 2nd-stage-enable-WSW-program instructions; and to determine that a match results, indicating that decryptors, 224 and 231, are decrypting received information correctly. Determining a match causes controller, 20, to determine, in a predetermined fashion, that signal stripper, 229, is correctly stripping information from the aforementioned strip-designated portion of the video transmission and transferring received video without said stripped information and that signal generator, 230, is correctly inserting complete information of the aforementioned unique digital code into the aforementioned insertion-designated portion of the video transmission and transferring received video with said inserted information.

XXII. COLUMN 22

Column 22 lines 2-4.	If they have not, signal processor, 200, shuts down the decryption of the title and prevents its delivery to the customer.	Page 308 line 31 to page 309 line 11.	(Simultaneously other stations compare selected information of said check sequence to selected informations of said 2nd-stage-enable-WSW-program instructions and verify the correct functioning of local signal strippers, 229, and generators, 230. At each station where a controller, 20, determines that a match does not result--which indicates that a decryptor, 224 or 231, is not decrypting its received information correctly and suggests that the preprogrammed SPAM operating information of said station may have been tampered with--or determines that a stripper, 229, or a generator, 230, fails to function correctly, so determining match causes said controller, 20, to cause all information of
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1981 Spec. Reference	1981 Language	1987 Spec Reference	1987 Language
Specification Correlation Chart			
Column 22 line 5			said 2nd-WSW-program-enabling-message (#7) to be erased from all memory of said station except for a particular portion of said 2nd-stage-enable-WSW-program instructions loaded at the RAM of said controller, 20....
	The General Case		A Summary Example #11 ... and the General Case
Column 22 lines 6-15.	It is obvious to one of ordinary skill in the art that the foregoing is presented by way of example only and that the invention is not to be unduly restricted thereby since modifications may be made in the structure of the various parts without functionally departing from the spirit of the invention. FIG 6 should make this clear. The receiver site depicted in FIG 6 has multiple means for receiving programming transmissions. All received programming is analyzed and evaluated by signal processor, 200.	See generally page 533 line 23 to page 557 line 32. Page 556 line 33 to page 557 line 32.	It is obvious to one of ordinary skill in the art that the foregoing is presented by way of example only and that the invention is not to be unduly restricted thereby since modifications may be made in the structure of the various parts or in the methods of their functioning without functionally departing from the spirit of the invention. Any SPAM message and any other programming transmission can be caused, through encryption/decryption and other SPAM regulating techniques of the present invention, to take affect fully only selected stations and station apparatus. Because any transmission station can invoke any SPAM controlled function by transmitting a SPAM message with meter-monitor segment information, invoking any given SPAM controlled function can also cause meter information and or monitor information to be processed in the fashions described above at apparatus and stations where said controlled function is invoked. Intermediate transmission stations can be equipped with SPAM regulating capacity such as that illustrated in Fig. 4, monitoring capacity such as that illustrated in Fig. 5, and control information switching and bus communications capacity such as that illustrated in Figs. 7 and 8. Controlling such capacity by means of transmitted SPAM messages, a remote network origination and control station can transmit programming to intermediate transmission stations, regulate and meter the use of said programming at said stations, monitor the use and usage of said programming at said stations, and control communication of control information at said stations all in the fashions that apply above to ultimate receiver stations. And any given transmission station can cause its receiver stations to function automatically not only in the fashions described above in the sections on automating ultimate receiver stations but in any appropriate fashion that a network origination and control station can cause intermediate transmission stations to function automatically.

1981 Language	1987 Spec Reference	1987 Language
1981 Spec Reference	1981 Language	1987 Spec Reference
<p>Column 22 lines 15-20.</p>	<p>Working with microcomputer, 205, which is preprogrammed to present received programming in predetermined fashions determined at the receiver site, signal processor, 200, permits and facilitates such presentations in accordance with the intentions of the suppliers of the programming at remote sites.</p>	<p>Page 428 line 21 to page 429 line 17.</p>
<p>Column 22 lines 20-24.</p>	<p>Working together, signal processor, 200, and microcomputer, 205, can control all local equipment and manage local presentations in any fashion feasible given the nature of the local equipment and the programming.</p>	<p>Page 444 line 31 to page 445 line 22.</p>
<p>The program-unit-of-interest information preprogrammed at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular specific-WSW information that reflects the wish of the subscriber of said station to view (or record) said "Wall Street Week" program when said program is transmitted. In a predetermined fashion, said subscriber has caused to be included in said program-unit-of-interest information. (Microcomputers, 205, of selected other stations of said large plurality of stations are also so preprogrammed.) The station-specific-television-program-selection-and-display instructions at the microcomputer, 205, of the station of Figs. 7 and 7C includes particular information that said subscriber will pay up to a certain limit--for example, twenty-five cents--to be permitted to receive said program and that, if the TV set, 202, of said station is switched off when information of the transmission of said program is detected, power should be switched on to said TV set, 202, and said program should be displayed at the monitor, 202M, of said set and, in addition, power should be switched on to the video recorder/player, 217, of said station, and said program should be recorded at said recorder/player, 217.</p> <p>The signal processor, 200, of said station scans sequentially all received television transmission channels in the fashion described above and is preprogrammed at the RAM associated with the control processor, 39J, of its decoder, 30, to respond in a particular controlled function fashion whenever a SPAM message with an execution segment of particular available-television-program information is detected. Said signal processor, 200, has capacity for actuating and tuning TV set, 202, and video recorder, 217, and for controlling microcomputer, 205.</p> <p>Automatically, controller, 20, transmits particular information to said decoder, 145, that causes said decoder, 145, to determine, in a predetermined fashion, that power is not on to monitor, 202M, and to respond by transmitting particular 202M-is-not-on information to controller, 20, via said link.</p> <p>The fact that monitor, 202M, is not on signifies that the subscriber of the station of Fig. 7 is not viewing television information at monitor, 202M, and suggests that said subscriber may not even be present at said station.</p>	<p>Page 428 line 21 to page 429 line 17.</p>	<p>Page 444 line 31 to page 445 line 22.</p>

1981 Spec Reference	1981 Language	1987 Spec Reference	1987 Language
			<p>Specification Correlation Chart</p> <p>Receiving said 202M-is-not-on information causes controller, 20, under control of said additional 2nd-stage-enable-WSW-program instructions, to cause microcomputer, 205, to input particular preprogrammed instructions to said controller, 20, which instructions reflect the the specific fashion in which said subscribe wants any given selected program to be selected and displayed. Automatically, controller, 20, inputs a particular choose-mode-of-selection-and-display instruction and said 202M-is-not-on information to microcomputer, 205, and receiving said instruction and said information causes microcomputer, 205, in a predetermined fashion, to process the aforementioned station-specific-television-program-selection-and-display instructions. Automatically, under control of said instructions, microcomputer, 205, inputs to controller, 20, particular preprogrammed display-at-202M-and-record-at-217 instructions.</p>

APPENDIX D

**GLOSSARY OF DEFINED TERMS
TO THE 1987 PRIORITY INSTANT SPECIFICATION**

GLOSSARY OF DEFINED TERMS

1987 Priority U.S. Patent Application

The following terms are defined and used in specific ways in U.S. Patent No. 4,965,825 and its continuations, including Applicants' instant specification. Terms that appear at the left margin in quotation marks are formally defined in the patent disclosures. The meanings of terms that are shown below without quotation marks are made clear in the context in which they appear.

A

B

"broadcast" ... page 12 line 22 ... to transmit programming over-the-air.

"broadcast print" ... page 1 line 25 ... Radio and electronic print services such as stock brokers' so-called "tickers" and "broad tapes" are ... powerful, user friendly mass media. (Hereinafter, the electronic print mass medium is called, "broadcast print.")

C

cadence information ... page 60 line 12 ... Cadence information which consists of headers, certain length tokens, and signals that are called "end of file signals" enables subscriber station apparatus to distinguish each instance of header information in any given message stream and, hence, to distinguish the individual messages of said stream. In the present invention, subscriber station apparatus are preprogrammed to process cadence information.

"cablecast" ... page 12 line 23 ... to transmit programming over hard-wire.

"combined" media ... page 2 line 17 ... Today great potential exists for combining the capacity of broadcast communications media to convey ideas with the capacity of computers to process and output user specific information. One such combination would provide a new radio-based or broadcast print medium with the capacity for conveying general information to large audiences--e.g., "Stock prices rose today in heavy trading,"--with information of specific relevance to each particular user in the audience--e.g., "but the value of your stock portfolio went down." (Hereinafter, the new media that result from such combinations are called "combined" media.)

"combining synch command" ... page 26 line 20 ... (Hereinafter, an instruction such as the above

signal of "GRAPHICS ON" that causes subscriber station apparatus to execute a combining operation in synchronization is called a "combining synch command." Said initial signal word or words that preceded the above program instruction set provide another example of a combining synch command in that said word or words synchronized all subscriber station computers in commencing loading and running information for a particular combining.)

command ... page 44 line 12 ... As Fig. 2E shows, [a] header and execution and meter-monitor segments constitute [one form of] a command.

A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions.

A command is always constituted of at least a header and an execution segment. With respect to any given command, its execution segment contains information that specifies the apparatus that said command addresses and specifies a particular function or functions that said command causes said apparatus to perform. (Hereinafter, functions that execution segment information causes subscriber station apparatus to perform are called "controlled functions.")

Commands often contain meter-monitor segments. ...

...

... page 47 line 11 ... Commands can address many apparatus and execute many controlled functions.

"control invoking instructions" ... page 23 line 24 ... see "invoking broadcast control"

"controlled functions" ... page 44 line 22 ... (Hereinafter, functions that execution segment information causes subscriber station apparatus to perform are called "controlled functions.")

...

... page 46 line 8 ... Examples of controlled functions include:

Load and run the contents of the information segment.

Decrypt the execution segment using decryption key G.

Decrypt the execution and meter-monitor segments using decryption key J.

Commence the video overlay combining designated in the meter-monitor segment.

Modify the execution segment to instruct URS microcomputer, 205, to commence overlay designated in meter-monitor segment, record the contents of the execution and meter-monitor segments, and transfer command to URS microcomputer, 205.

Print the contents of the information segment.

Record the contents of the execution and meter-monitor segments; transfer them to URS decryptors, 224, and execute the preprogrammed instructions that cause URS decryptors, 224, to commence decrypting with said contents as decryption key; execute preprogrammed instructions that cause URS cable converter boxes, 222, to switch to cable channel Z; execute preprogrammed instructions that cause URS matrix switches, 258, to configure its switches to transfer the input from converter boxes, 222, to decryptors, 224, and the output from decryptors, 224, to microcomputers, 205; modify the execution segment to instruct URS microcomputers, 205, to commence loading and executing the information received from URS decryptors, 224 via URS switches, 258.

"controller, 39" ... page 156 line 26 ... More precisely, controller, 39, of decoder, 203, and SPAM-controller, 205C, are one and the same (and are called, hereinafter, "controller, 39"). Thus the preferred embodiment of controller, 39, is configured and preprogrammed not only to control the detecting, correcting, converting, and executing of controlled functions at decoder, 203, but also to input to and execute at microcomputer, 205, the information of any given detected SPAM message that is addressed to URS microcomputers, 205.

"covert control" ... page 218 line 6 ... By themselves, the first and second features provide a technique whereby a message such as the second message of the "Wall Street Week" program can take affect at only selected stations (such as those stations preprogrammed with decryption key J) without being decrypted at said stations. (Hereinafter, this technique is called "covert control.")

"covert control-invoking value" ... page 285 line 7 ... (Hereinafter, the normal binary value of a given instance of information that invokes a preprogrammed function--such as, for example, the "100110" that is the normal value of said execute-conditional-overlay-at-205 information--is called a "standard control-invoking value", and a value that temporary replaces a standard control-invoking value in the course a covert control application-- such as "111111" in example #6--is called a "covert control-invoking value".)

"CPU" ... page 22 line 33 ... central processor unit ... also defined at page 87 line 21 as ... central processor unit

D

"data module set" ... page 365 line 24 ... (Hereinafter, a data module that is transmitted to subscriber stations and processed by computers of said stations under control of instructions of a

program instruction set is called a "data module set,"
"data module set of Q" ... page 366 line 18 ... (Hereinafter, the data module set generated in example #9, under control of said intermediate generation set of Q, is called the "data module set of Q".)
"data module set of Q.1" ... page 378 line 31 ... (Hereinafter, the data module set generated at the station of Fig. 6 in example #10 is called the "data module set of Q.1", signifying that said set is one version of complete data module set information of said instance of the network transmission of Q.)
"data module set of Q.2" ... page 380 line 33 ... [Hereinafter, the data module set generated at said second station is called the "data module set of Q.2", signifying that said set is a second version of complete data module set information of said instance of the network transmission of Q.])

E

end of file signals ... page 62 line 26 ... distinctive end of file signals are required to communicate the locations of the ends of information segments to subscriber station apparatus. In the present invention, each end of file signal is transmitted immediately after the end of an information segment; said signal is part of the information of the message in which said segment occurs; and said signal is located at the end of said message.

At any given time, subscriber station apparatus are preprogrammed to process only one distinct signal as an end of file signal. In order for said apparatus to distinguish an instance of said signal from all other signal information, an end of file signal must differ distinctly from all other information. Signal information, especially information transmitted in an information segment, can vary greatly in composition. Accordingly, to be distinctive, an end of file signal must be long and complex to detect.

An end of file signal consists of a particular sequence of bits of binary information. In the preferred embodiment each bit is identical to every other bit; that is, disregarding error correction information, an end of file signal consists of a sequence of "1" bits (eg. "11111111") or "0" bits (eg. "00000000"). In the preferred embodiment, end of file signals are composed of "1" bits rather than "0" bits.

see EOFs, EOFs bit and MOVE bit

EOFs ... refers to End Of File Signal ... see end of file signals

"EOFs bit" ... page 64 line 1 ... An end of file signal consists of a particular sequence of bits of binary information. In the preferred embodiment each bit is identical to every other bit; that is, disregarding error correction information, an end of file signal consists of a sequence of "1" bits (eg. "11111111") or "0" bits (eg. "00000000"). In the preferred embodiment, end of file signals are composed of "1" bits rather than "0" bits. Zero is a value that occurs frequently in data and in mathematics, and however many bits may occur in a binary data word that consists of a series of "0" bits, the numeric value of said word remains zero.

Numeric values that are represented in binary form by a sequence of "1" bits, especially a sequence that is long, occur in data and mathematics far less frequently than zero. Thus the preferred composition bit is "1" because the chance of data being joined in a given signal in such a way that two or more instance of information combine inadvertently and create the appearance of an end of file signal is far smaller if the preferred bit is "1" than if it is "0". (Hereinafter, the preferred binary end of file signal composition bit, "1", is called an "EOFS bit," and for reasons that are explained below, the alternate binary bit, "0", is called a "MOVE bit.")

"EOFS Complete Flag" ... page 69 line 10 ... see EOFS valve components

"EOFS Empty Flag" ... page 69 line 10 ... see EOFS valve components

"EOFS Standard Length Location" ... page 69 line 10 ... see EOFS valve components

"EOFS Standard Word Location" ... page 69 line 10 ... see EOFS valve components

"EOFS valve" ... page 65 line 19 ... an apparatus, called an "EOFS valve," that detects end of file signals

EOFS valve components ... page 69 line 10 ... In the present invention, any microprocessor, buffer/comparator, or buffer can be adapted and preprogrammed to detect end of file signals. At any given SPAM apparatus that is so adapted and preprogrammed, particular dedicated capacity exists for said detecting. Said capacity includes standard register memory or RAM capacity, well known in the art, including three particular memory locations for comparison purposes, one particular memory location to serve as a counter, and three so-called "flag bit" locations to hold particular true/false information. (Hereinafter, said three particular memory locations, said one particular memory location, and said three flag bit locations are called the "EOFS Word Evaluation Location," "EOFS Standard Word Location," and "EOFS Standard Length Location"; the "EOFS WORD Counter"; and the "EOFS WORD Flag," "EOFS Empty Flag," and "EOFS Complete Flag" all respectively.)

"EOFS WORD" ... page 70 line 12 ... (Hereinafter, one signal word of EOFS bits is called an "EOFS WORD.")

"EOFS WORD Counter" ... page 69 line 10 ... see EOFS valve components

"EOFS Word Evaluation Location" ... page 69 line 10 ... see EOFS valve components

"EOFS WORD Flag" ... page 69 line 10 ... see EOFS valve components

"EPROM" ... page 33 line 17 ... erasable programmable ROM [or other forms of programmable nonvolatile memory]

execution segment ... page 45 line 22 ... Execution segment information includes the subscriber station apparatus that the command of said segment addresses and the controlled functions said apparatus is to perform. ("ITS" refers, hereinafter, to intermediate transmission station apparatus, and "URS" refers to ultimate receiver station apparatus.) [Some] examples of addressed apparatus include:

ITS signal processors (in 71 in Fig. 6),
ITS controller/computers (73 in Fig. 6),
URS signal processors (200 in Fig. 7),
URS microcomputers (205 in Fig. 7),
URS printers (221 in Fig. 7), and
URS utilities meters (262 in Fig. 7).

... page 47 line 16 ... Execution segment information operates by invoking preprogrammed operating instructions that exist at each subscriber station apparatus that is addressed. ... [see controlled function]

For each appropriate addressed apparatus and controlled function combination a unique execution segment binary information value is assigned. ...

For any given command, the execution segment information of said command invokes, at each relevant subscriber station apparatus, the preprogrammed operating instructions uniquely associated with its particular binary value in particular comparing and matching fashions that are described [extensively.]

The determination of appropriate addressed apparatus and controlled function combinations takes into account the facts that different apparatus, at any given subscriber station, can be preprogrammed to interpret any given instance of execution segment information differently and that subscriber station apparatus can be preprogrammed to automatically alter execution segment information. ...

...

... page 49 line 16 ... In the preferred embodiment, at any given time the number of binary information bits in any given instance of execution segment information is a particular constant number. [see "X."]

F

"field" ... page 50 line 28 ... see "meter-monitor field."

first combining synch command ... page 89 line 8 ... Each example focuses on the processing of the three signal messages of the Fig. 1C combining. The information of said messages include three combining synch commands and one program instruction set.

The first message is of the information associated with the first combining synch

command. [See page 23 line 35 through page 24 line 16 of the specification as well as "combining synch command" above.] Said first command has a "01" header, an execution segment, and a meter-monitor segment of six fields. Said command is followed by an information segment that contains said program instruction set, and said information segment is followed by an end of file signal. Said first command addresses URS microcomputers, 205, and causes said computers, 205, to load and run the program instruction set transmitted in the information segment. Each meter-monitor segment field of said command contains information that identifies one of the following:

- . the origin of said "Wall Street Week" transmission,
- . the subject matter of said "Wall Street Week" program,
- . the program unit of said program,
- . the day of said transmission within a particular one hundred year period,
- . the supplier of the program instruction set in the information segment following said first combining synch command, and
- . the format of said meter-monitor segment information.

G

"guide commands ... page 267 line 26 ... All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the 1st-, 2nd-, and 3rd-old-program-message (#5) messages, the 2nd-new-program-message (#5), and the 1st-old-radio-program- message (#5) inform no station control apparatus of new programming transmissions because said commands are addressed to no apparatus; the execution segment of each is the aforementioned pseudo-command. (Hereinafter, each said signal is called a "transparent command" because no subscriber station control apparatus "sees" said signal.)

H

"H" ... page 95 line 30 ... a particular preprogrammed constant number of the first converted bits of said binary information. Said constant number is the number of bits in a SPAM command header. (Hereinafter, said constant number is called "H".)

"H+X" ... page 127 line 13 ... At any given time, any given instance of "10" header message command information is of one constant binary length--the aforementioned header+exec constant length. (Hereinafter, said length is called "H+X" and is the sum of H plus X.)

"H+X+L" ... page 110 line 16 ... a particular preprogrammed constant number that is the sum of H plus X plus L to the x-bits information at said SPAM-length-info memory. (Hereinafter, said constant is called "H+X+L".)

header ... page 45 line 4 ... In simple preferred embodiments, at any given time the number of binary information bits in any given instance of header information is a particular constant number. In other words, every header contains the same number of bits. In the simplest preferred embodiment, said constant number is two, all headers consist of two bits binary information, and commands are identified by one of three binary headers:

10 - a command with an execution segment alone;

00 - a command with execution and meter-monitor segments; and

01 - a command with execution and meter-monitor segments that is followed by an information segment.

... page 54 line 12 ... In the simplest preferred embodiment, a fourth type of header is:

11 - an additional information segment transmission following a "01" header command and one or more information segments which additional segment is addressed to the same apparatus and invokes the same controlled functions as said "01" command.

I

information segment ... page 53 line 33 ... Information segments follow commands and can be of any length. Program instruction sets, intermediate generation sets, other computer program information, and data (all of which are organized in a fashion or fashions well known in the art) are transmitted in information segments. An information segment can transmit any information that a processor can process. It can transmit compiled machine language code or assembly language code or higher level language programs, all of which are well known in the art. Commands can execute such program information and cause compiling prior to execution.

"intermediate generation sets" ... page 42 line 8 ... (Hereinafter, instances of computer program information that cause intermediate transmission station apparatus to generate program instruction set information and/or command information are called "intermediate generation sets.") ... see also "program instruction set" ... "intermediate generation set" is also defined at page 356 line 13 as ... (Hereinafter, an instance of computer program instructions that cause a computer, at an intermediate transmission station, to generate information of a program instruction set is called an "intermediate generation set.")

"intermediate generation set of Q" ... page 359 line 9 ... (Hereinafter, the intermediate generation set that causes any given intermediate transmission station to generate a program instruction set of an instance of the transmission of the programming of program unit Q is called the "intermediate generation set of Q".)

"intermediate transmission stations" ... page 40 line 33 ... (Hereinafter, ... stations that receive and retransmit broadcast transmissions are called "intermediate transmission stations", ...

"interval," as in "interval Q" of unit Q ... page 355 line 26 ... When the aforementioned remote distribution station inputs information to computer, 73, via network, 98, regarding unit Q, said distribution station inputs information that Q is particular combined medium programming and instructs computer, 73, to commence particular program instruction set generation in a particular fashion at a particular time interval prior to the scheduled playing of Q. (Hereinafter, a particular instance of such a time period is called "interval," as in "interval Q" of unit Q.)

"invoking broadcast control" ... page 23 line 25 ... Operating in said preprogrammed fashion under control of said first set of instructions, microcomputer, 205, reaches a stage at which the subscriber can input information only under control of signals embedded in the broadcast transmission and can reassume control of microcomputer, 205, ... only by executing a system reset (or so-called "warm boot") which on an IBM PC is accomplished by ... (Hereinafter, this first set of instructions is called the "control invoking instructions," and the associated steps are called "invoking broadcast control.")

"ITS" ... page 45 line 25 ... refers to intermediate transmission station apparatus.

J

K

L

"L" ... page 103 line 4 ... a third preprogrammed constant number of next bits and record said bits at particular memory. Said third constant number is the particular number of bits in an

instance of SPAM meter-monitor format field length token information. (Hereinafter, said third constant number is called "L".)

"length token" ... page 52 line 5 ... each instance of a meter-monitor segment includes a format field that contains information that specifies the particular format of the meter-monitor segment of said instance. Within said field is a particular group of binary information bits (hereinafter, the "length token") that identifies the number of bits in a meter-monitor segment of said format. Each alternate length token has a unique binary information code. The number of information bits in each instance of a length token is the smallest number of bits capable of representing the binary value of the total number of meter-monitor segment bit length alternatives. And the unique code of each different alternative is within the range of binary numbers thus defined.

...

... page 53 line 20 ... In the preferred embodiment, the bits of the length token are the first bits in each meter-monitor segment. ...

M

"message" ... page 59 line 24 ... All of the information transmitted with a given header is called a "message." Each header begins a message, and each message begins with a header. More specifically, a message consists of all the SPAM information, transmitted in a given transmission, from the first bit of one header to the last bit transmitted before the first bit of the next header.

A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.

"meter command" ... page 48 line 33 ... The preferred embodiment includes ... one command that is addressed to URS signal processors, 200, (hereinafter, the "meter command") but does not instruct said processors, 200, to perform any controlled function. [This command is] always transmitted with meter-monitor segment data that receiver station apparatus automatically process and record. By transmitting ... meter command signals, transmission stations cause receiver station apparatus to record meter-monitor segment information without executing controlled functions. ... The meter command causes apparatus such as controller, 12, of Fig. 2D to transmit meter information to buffer/comparator, 14, without performing any controlled function.

"meter-monitor field" ... page 50 line 28 ... For each category of [meter information and/or monitor] information, a series of binary bits (hereinafter, a "field" or "meter-monitor field") exists in the meter-monitor segment to contain the [category] information.

meter-monitor segments ... page 44 line 26 ... contain meter information and/or monitor information, and the information of said segments causes subscriber station signal processor systems to assemble, record, and transmit meter records to remote billing stations and monitor records to remote ratings stations in fashions that are described [in many places of the disclosure, especially examples #3, #4 and #5.

...

... page 49 line 27 ... Examples of categories of [meter information and/or monitor] information include:

- meter instructions that instruct subscriber station meter apparatus to record particular meter-monitor segment information and maintain meter records of said information;

- origins of transmissions (eg., network source stations, broadcast stations, cable head end stations);

- dates and times;

- unique identifier codes for each program unit (including commercials);

- codes that identify uniquely each combining in a given combined medium program unit; codes that identify the subject matter of a program unit;

- unique codes for programming (other than programming identified by program unit codes) whose use obligates users to make payments (eg., royalties and residuals); and

- unique codes that identify the sources and suppliers of computer data.

For each category of information, a series of binary bits (hereinafter, a "field" or "meter-monitor field") exists in the meter-monitor segment to contain the information. In any given category such as origins of transmissions, each distinct item such as each network source; broadcast, or cable head end station has a unique binary information code. In the preferred embodiment, the number of information bits in that category's meter-monitor field is the smallest number of bits capable of representing the binary value of the total number of distinct items. And the information code of each distinct item is within the range of binary numbers thus defined. In the preferred embodiment, date and time fields have sixteen bits.

Few commands require meter-monitor information of every information category. Often commands require no more than the identification codes of a specific combined medium program unit and of a specific combined medium combining within said program unit.

Because the amount of information in meter-monitor segments varies from command

to command, in the preferred embodiment more than one format exists at any given time for meter-monitor segment information. ...

Because the number of categories of meter-monitor information varies from one command to the next, the length of meter-monitor segments varies. ...

In the preferred embodiment, each instance of a meter-monitor segment includes a format field that contains information that specifies the particular format of the meter-monitor segment of said instance. Within said field is a particular group of binary information bits (hereinafter, the "length token") that identifies the number of bits in a meter-monitor segment of said format. ...

In the preferred embodiment, each distinct meter-monitor segment format (including each distinct field format) also has a unique binary information code. ...

...

In the preferred embodiment, the bits of the length token are the first bits in each meter-monitor segment. ...

"MMS" ... page 104 line 7 ... (Hereinafter, the exact number of bits in any given meter-monitor segment is called, "MMS".)

"MMS-L" ... page 103 line 29 ... (Hereinafter, the number of the particular selected bit-length-number alternative associated with any given length token is called "MMS-L" to signify that said number is L bits less than the number bits in the meter-monitor segment in which said length token occurs.)

"MOVE bit" ... page 64 line 1 ... see "EOFS bit"

N

"normal transmission location" ... page 86 line 12 ... (Hereinafter, the preferred normal location for transmitting signals in any given communication medium is called, the "normal transmission location".)

"null outputs" ... page 159 line 10 ... Among such other outputs is one or more (hereinafter called, "null outputs") with capacity for accepting binary information and merely recording said information at particular memory associated with matrix switch, 39I, thereby overwriting and obliterating information previously recorded at said memory. The purpose of such a null output is to provide means whereby said switch can automatically cause information of any selected SPAM message to be discarded rather than transferred to addressed apparatus.

O

"original transmission stations" ... page 40 line 31 ... (Hereinafter, stations that originate broadcast

transmissions are called "original transmission stations," ...

P

"padding bits" ... page 55 line 22 ... particular bits are added at the end of any command that is not already a multiple of the particular signal word bit length that applies in signal processor system communications at the subscriber stations to which said transmission is transmitted. (Hereinafter, said bits are called "padding bits.") Padding bits communicate no command information nor are padding bits part of any information segment. The sole purpose of padding bits is to render the information of any given SPAM command into a bit length that is, by itself, complete for signal processor system communication. Padding bits are added to command information prior to the transmission of said information at said station, and all subscriber station apparatus are preprogrammed to process padding bits. The particular number of padding bits that are added to any given command is the smallest number of bits required to render the bit length of said command into a multiple of said signal word bit length.

"pre-transmission evaluation" ... page 65 line 29 ... To prevent such erroneous processing, in the preferred embodiment, after the initial generation of any given instance of SPAM message information (not including end of file signal information) and before the embedding and transmitting of said instance, said information is transmitted through an apparatus, called an "EOFS valve," that detects end of file signals and is described below. If said valve detects in said information particular information that constitutes an end of file signal, before being embedded and transmitted, the binary information of said instance is rewritten, in a fashion well known in the art that may be manual, to cause substantively the same information processing at subscriber stations without containing an instance of information that is identical to the information of an end of file signal. (Hereinafter, such pre-transmission processing of a message is called a "pre-transmission evaluation.")

"program instruction set" ... page 24 line 16 ... a ... set of [processing] instructions [conveyed in the information segment of a SPAM message] that is loaded and run [at receiver station (including ITS) computing apparatus] ... [at page 42 line 2, the meaning of "program instruction sets" is further defined as ->] (Hereinafter, instances of computer program information that cause ultimate receiver station apparatus to generate and display user specific information are called "program instruction sets.") ... [see also "intermediate generation set"]

"program instruction set of Q" ... page 365 line 18 ... (Hereinafter, the program instruction set generated in example #9, under control of said intermediate generation set of Q, is called the "program instruction set of Q".)

"program instruction set of Q.1" ... page 378 line 23 ... (Hereinafter, the program instruction set generated at the station of Fig. 6 in example #10 is called the "program instruction set of

Q.1", signifying that said set is one version of complete program instruction set information of said instance of the network transmission of Q.)

"program instruction set of Q.2" ... page 380 line 20 ... [Hereinafter, the program instruction set generated at said second station is called the "program instruction set of Q.2", signifying that said set is a second version of complete program instruction set information of said instance of the network transmission of Q.]

"program originating studio" ... page 20 line 29 ... (Hereinafter, a studio or station that originates the broadcast transmission of programming is called the "program originating studio.")

"program unit identification code" ... page 90 line 1 ... (Hereinafter, meter-monitor information that identifies the program unit of a given program may also be called the "program unit identification code".)

"programming" ... page 11 line 7 ... The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.

"pseudo command" ... page 48 line 31 ... The preferred embodiment includes one appropriate command (hereinafter called the "pseudo command") that is addressed to no apparatus ... [This command is] always transmitted with meter-monitor segment data that receiver station apparatus automatically process and record. By transmitting pseudo command ... signals, transmission stations cause receiver station apparatus to record meter-monitor segment information without executing controlled functions. The pseudo command enables a so-called ratings service to use the same system for gathering ratings on conventional programming transmissions that it uses for combined media without causing combined media apparatus to execute controlled functions at inappropriate times (eg., combine overlays onto displays of conventional television programming).

Q

R

"RAM" ... page 23 line 1 ... random access memory

"revoking broadcast control." ... page 513 line 25 ... the steps associated with returning a microcomputer, 205, from broadcast control to local control are called "revoking broadcast control."

"ROM" ... page 31 line 9 ... read only memory

S

second combining synch command ... page 89 line 3 ... Each example focuses on the processing of the three signal messages of the Fig. 1C combining. The information of said messages include three combining synch commands and one program instruction set.

...
... page 90 line 4 The second message is of the information associated with the second combining synch command. [See page 25 line 34 through page 26 line 8 of the specification as well as "combining synch command" above.] Said second command has a "00" header, an execution segment, and a meter-monitor segment of five fields and addresses URS microcomputers, 205. Said second command causes said computers, 205, to combine the Fig. 1A information of each microcomputer, 205, with the information of Fig. 1B and transmit the combined information to monitors, 202M. Each meter-monitor segment field of the second command contains information of one of the following:

- . the subject matter of said "Wall Street Week" program,
- . the program unit of said program,
- . the unique code of said overlay given said program unit information,
- . the minute of said transmission within a particular one month period, and
- . the format of said meter-monitor segment information.

segment ... page 44 line 4 ... Fig. 2E shows one example of the composition of signal information (excluding bit information required for error detection and correction). The information in Fig. 2E commences with a header which is particular binary information that synchronizes all subscriber station apparatus in the analysis of the information pattern that follows. Following said header are three segments: an execution segment, a meter-monitor segment, and an information segment. As Fig. 2E shows, the header and execution and meter-monitor segments constitute a command.

"signal processor" ... page 15 line 8 ... signal processing apparatus defined at page 15, line 8.

"signal processor alternative #1" ... page 34 line 1 ... For certain applications, one particular embodiment (hereinafter, "signal processor alternative #1") can be configured to receive only other inputs at buffer/comparator, 8, in which case said embodiment has no oscillator, 6; switch, 1; mixers, 2 and 3; or decoders, 30 or 40.

"signal processor alternative #2" ... page 34 line 6 ... For other particular applications, another

particular embodiment (hereinafter, "signal processor alternative #2") can be configured to receive only inputs at buffer/comparator, 14, in which case said embodiment has only buffer/comparator, 14; recorder, 16; clock, 18; and the control device apparatus associated with controller, 20.

"signal records" ... page 31 line 34 ... Buffer/comparator, 14, receives signal information that is meter information and/or monitor information from controller, 12, and from other inputs; organizes said received information into meter records and/or monitor records (called, in aggregate, hereinafter, "signal records")

"signal unit" ... page 14 line 26 ... (The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a unique purchase order number identifying the proper use of a programming unit, or a general instruction identifying whether a programming unit is to be retransmitted immediately or recorded for delayed transmission. The term "signal word" hereinafter means ...

"signal word" ... page 14 line 32 ... The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. Such strings may or may not have predetermined data bits to identify the beginnings and ends of words. Signal words may contain parts of signal units, whole signal units, or groups of partial or whole signal units or combinations.)

signals ... page 40 line 17 ... The signals of the present invention are the modalities whereby stations that originate programming transmissions control the handling, generating, and displaying of programming at subscriber stations.

...

SPAM signals control and coordinate a wide variety of subscriber stations. Said stations include ... "local affiliate" broadcast stations that receive and retransmit single network transmissions; ... "cable system headends" that receive and retransmit multiple network and local broadcast station transmissions; and ... "media centers" in homes, offices, theaters, etc. where subscribers view programming.

...

... page 43 line 32 ... SPAM signals contain binary information of the sort well known in the art including bit information required for error correction using forward error correction techniques, well known in the art, in point to multi-point communications; request retransmission techniques, well known in the art, in point to point communications; and/or other error correction techniques, as appropriate.

Fig. 2E shows one example of the composition of signal information (excluding bit information required for error detection and correction). The information in Fig. 2E commences with a header which is particular binary information that synchronizes all subscriber station apparatus in the analysis of the information pattern that follows.

Following said header are three segments: an execution segment, a meter-monitor segment, and an information segment. As Fig. 2E shows, the header and execution and meter-monitor segments constitute a command.

"SPAM" ... page 40 line 21 ... (The term, "SPAM," is used, hereinafter, to refer to signal processing apparatus and methods of the present invention.)

"specified condition commands" ... page 44 line 33 ... Particular commands (called, hereinafter, "specified condition commands") always contain meter-monitor segments. Said commands cause addressed apparatus to perform controlled functions only when specified conditions exist, and meter-monitor information of said commands specifies the conditions that must exist.

"standard control-invoking value" ... page 285 line 7 ... see "covert control-invoking value"

T

third combining synch command ... page 89 line 3 ... Each example focuses on the processing of the three signal messages of the Fig. 1C combining. The information of said messages include three combining synch commands and one program instruction set.

...
... page 90 line 28 The third message is of the information associated with the third combining synch command. [See page 26 line 33 through page 27 line 7 of the specification as well as "combining synch command" above.] Said third command has only a "10" header and an execution segment and addresses URS microcomputers, 205. Said command causes said computers, 205, to cease combining and transmit only the received composite video transmission to monitors, 202M, and to continue processing in a predetermined fashion (which fashion may be determined by the aforementioned program instruction set).

"transparent commands ... page 267 line 34 ... All eight of said messages are commands. The 1st- and 3rd-new-program-message (#5) and the 1st-new-radio-program- message (#5) signals are addressed to microcomputer, 205. Each informs said microcomputer of new programming transmissions to which said microcomputer can tune appropriate station receiver and display apparatus in fashions described below. (Hereinafter said commands are called "guide commands" because they can guide station control apparatus to desired programming.) By contrast, the 1st-, 2nd-, and 3rd-old-program-message (#5) messages, the 2nd-new-program-message (#5), and the 1st-old-radio-program- message (#5) inform no station control apparatus of new programming transmissions because said commands are addressed to no apparatus; the execution segment of each is the aforementioned pseudo-command. (Hereinafter, each said signal is called a "transparent command" because no subscriber station control apparatus "sees" said signal.)

U

"ultimate receiver stations" ... page 40 line 31, page 40 line 33, and page 40 line 35 ... (Hereinafter, ... stations where subscribers view programming are called "ultimate receiver stations.")

"URS" ... page 45 line 26 ... refers to ultimate receiver station apparatus.

V

W

"w-bits information" ... page 103 line 29 ... Said match causes SPAM-controller, 205C, to place particular preprogrammed bit-length-number information at said SPAM-length-info-@205 memory. (Said particular bit-length-number information is called, hereinafter, "w-bits information".) Said information is the precise number of bits, following the last of said L bits, that remain in the meter-monitor segment of the command associated with said length token. Said number is not a preprogrammed constant value such as H, X, and L that is the same for every SPAM command with a meter-monitor segment. Rather, said number is a variable that may differ from one SPAM meter-monitor segment to the next. More precisely, it is, for any given meter-monitor segment, a selected one of several preprogrammed bit-length-number information alternatives.

"W-token information" ... page 103 line 15 ... Automatically SPAM-controller, 205C, compares the information at said SPAM-length-info-@205 memory with preprogrammed token-comparison-@205 information and determines that said information at memory matches particular token-comparison-@205 information (which particular information is called, hereinafter, "W-token information").

"wireless" ... page 248 line 21 ... over-the-air (hereinafter, "wireless")

X

"X" ... page 96 line 11 ... a second preprogrammed constant number of next bits and record said bits, in their order after conversion, at particular SPAM-exec register memory. Said second constant number is the particular number of bits in a SPAM execution segment. (Hereinafter, said second constant number is called "X".)

Y

Z

MESSAGES DEFINED IN SPECIFIC EXAMPLES

EXAMPLE #1

EXAMPLE #2

"2nd meter information (#2)" ... page 152 line 34 ...

EXAMPLE #3

"1st monitor information (#3)" ... page 174 line 21 ...

"2nd monitor information (#3)" ... page 190 line 14 ...

EXAMPLE #4

"1st meter-monitor information (#4)" ... page 213 line 32 ...

"2nd meter-monitor information--second precondition failed--(#4)." ... page 238 line 16 ...

"2nd meter-monitor information (#4)." ... page 239 line 3 ...

"2nd monitor information (#4)" ... page 240 line 40 ...

EXAMPLE #5

1st command (#5) ... page 251 line 17 ...

"1st-old-program-command (#5)" ... page 252 line 13 ...

"1st-new-program-message (#5)" ... page 253 line 1 ...

"2nd command (#5)" ... page 256 line 5 ...
"2nd-old-program-message (#5)" ... page 256 line 27 ...
"2nd-new-program-message (#5)" ... page 257 line 5 ...
"3rd command (#5)." ... page 259 line 25 ...
"3rd-old-program-message (#5)" ... page 260 line 12 ...
"3rd-new- program-message (#5)" ... page 260 line 29 ...
"4th command (#5)" ... page 263 line 5 ...
"1st-old-radio-program-message (#5)" ... page 264 line 28 ...
"1st-new-radio-program-message (#5)" ... page 265 line 9 ...

EXAMPLE #6

"1st supplementary message (#6)" ... page 281 line 35 ...
"2nd supplementary message (#6)" ... page 281 line 35 ...

EXAMPLE #7

please-fully-enable-WSW-on-CC13-at-particular-8:30 information ... page 289 line 28 ...
"local-cable-enabling-message (#7)" ... page 291 line 19 ...
"1st-WSW-program-enabling-message (#7)" ... page 297 line 23 ...
"1st- WSW-decryption-check (#7)" ... page 300 line 15 ...
"2nd-WSW-program-enabling-message (#7)" ... page 304 line 10 ...
"2nd-WSW-decryption-check (#7)" ... page 308 line 5 ...
Prepare-To-Retransmit-WSW message ... page 430 line 35 ...
Select-WSW-Program-Unit SPAM message ... page 435 line 19 ...

EXAMPLE #8

"first- network-cue-to-transmit-locally message (#8)") ... page 335 line 30 ...

"first-network-cue-to-transmit-network message (#8)" ... page 335 line 35 ...

"select-A-message (#8)," the "select-B-message (#8)," the "select-C-message (#8)," and so forth up to the "select-Z- message (#8)," each message referring to the corresponding program unit: A, B, C, and so forth up to Z, respectively, and said messages are called collectively the "cue-to-select messages (#8)." ... page 342 line 14 ...

EXAMPLE #9

"generate-set-information message (#9)" ... page 359 line 3 ...

"first cueing message (#9)" ... page 366 line 27 ...

"align-URS- microcomputers-205 message (#9)" .. Page 368 line 6 ...

"synch-SPAM-reception message (#9)" ... page 368 line 19 ...

"control-invoking message (#9)" ... page 368 line 30 ...

"transmit-data-module-set message (#9)" ... page 369 line 22 ...

"data-module-set message (#9)" ... page 369 line 30 ...

"transmit-and-execute-program-instruction-set message (#9)" ... page 371 line 9 ...

"program-instruction-set message (#9)" ... page 371 line 17 ...

"cease-stripping-and-embedding message (#9)" ... page 372 line 13 ...

"1st commence-outputting message (#9)" ...page 372 line 25 ...

"2nd commence-outputting message (#9)" ... page 372 line 26 ...

"3rd commence-outputting message (#9)" ... page 372 line 27 ...

"1st cease-outputting message (#9)" ... page 372 line 27 ...

"4th commence-outputting message (#9)" ... page 372 line 28 ...
"5th commence-outputting message (#9)" ... page 372 line 29 ...
"6th commence-outputting message (#9)" ... page 372 line 30 ...
"2nd cease-outputting message (#9)" ... page 372 line 30 ...
"second cueing message (#9)" ... page 373 line 5 ...
"disband-URS- microcomputers-205 message (#9)" ... page 373 line 22 ...

EXAMPLE #10

"generate-set-information message (#10)" ... page 377 line 34 ...
"load-set-information message (#10)" ... page 381 line 23 ...
"align-URS-microcomputers-205 message (#10)" ... page 382 line 26 ...
"synch- SPAM-reception message (#10)" ... page 383 line 4 ...
"control-invoking message (#10)" ... page 383 line 13 ...
"transmit-data-module-set message (#10)" ... page 383 line 24 ...
"transmit-and-execute-program-instruction-set message (#10)" ... page 385 line 7 ...
"program-instruction-set message (#10)" ... page 385 line 14 ...
"cease-stripping-and-embedding message (#10)" ... page 387 line 9 ...
"1st commence-outputting message (#10)" ... page 387 line 25 ...
"2nd commence-outputting message (#10)" ... page 387 line 26 ...
"3rd commence-outputting message (#10)" ... page 387 line 26 ...
"1st cease-outputting message (#10)" ... page 387 line 27 ...
"4th commence-outputting message (#10)" ... page 387 line 28 ...

"5th commence-outputting message (#10)" ... page 387 line 29 ...

"6th commence-outputting message (#10)" ... page 387 line 29 ...

"2nd cease-outputting message (#10)" ... page 387 line 30 ...

"disband-URS-microcomputers-205 message (#10)" ... page 387 line 34 ...

"local-output-cueing message (#10)" ... page 388 line 7 ...

EXAMPLE #11

first-master-cueing message (#11) ... page 545 line 32 ...

first-national-cueing message (#11) ... page 546 line 3 ...

second-master-cueing message (#11) ... page 546 line 33 ...

transmit-program-instruction-set SPAM message (#11) ... page 547 line 17 ...

local-second-cueing message (#11) ... page 552 line 12 ...

second-cueing message (#11) ... page 554 line 22 ...